



Government of Karnataka

SOCIAL SCIENCE

8

EIGHTH STANDARD

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KARNATAKA TEXT BOOK SOCIETY (R)

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Bangalore-85.

Preface

The Textbook Society, Karnataka has been engaged in producing new textbooks according to the new syllabi prepared which in turn are designed based on NCF – 2005 since June 2010. Textbooks are prepared in 11 languages; seven of them serve as the media of instruction. From standard 1 to 4 there is the EVS and 5th to 10th there are three core subjects namely mathematics, science and social science.

NCF – 2005 has a number of special features and they are:

- Connecting knowledge to life activities
- Learning to shift from rote methods
- Enriching the curriculum beyond textbooks
- Learning experiences for the construction of knowledge
- Making examinations flexible and integrating them with classroom experiences
- Caring concerns within the democratic policy of the country
- Make education relevant to the present and future needs.
- Softening the subject boundaries-integrated knowledge and the joy of learning.
- The child is the constructor of knowledge

The new books are produced based on three fundamental approaches namely. Constructive approach, Spiral Approach and Integrated approach

The learner is encouraged to think, engage in activities, master skills and competencies. The materials presented in these books are integrated with values. The new books are not examination oriented in their nature. On the other hand they help the learner in the total development of his/her personality, thus help him/her become a healthy member of a healthy society and a productive citizen of this great country, India.

In Social science especially in standard V the first chapter deals with the historical, geographical, cultural and local study of the division in which learners live. Chapters on sociology, business studies and commerce are introduced in standard VIII as per the guidelines of NCF-2005. A lot of additional information is given through box items. Learners are encouraged to work towards construction of knowledge through assignments and projects. Learning load of memorizing dates has been reduced to the minimum. Life values have been integrated with content of each chapter.

The Textbook Society expresses grateful thanks to the chairpersons, writers, scrutinisers, artists, staff of DIETs and CTEs and the members of the Editorial Board and printers in helping the Text Book Society in producing these textbooks.

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Foreword

The text book which is being prepared for the high school students has come out differently and distinctively. This book has come out with unique features while compared with the previous texts that have appeared in the Text book. It should be noted that the 8th standard text book has incorporated Political Science, Sociology, Economics and Business Studies along with the traditional subjects like History and Geography as per the guidelines of NCF-2005.

We have made all the attempts to make this text easily understood and read comfortably, since this is a project of the Government oriented towards the common man. The present text has included the creative curriculum in order to discourage rote-learning in the system. We have designed the texts as it should correlate with the experiences of the students. We have deleted unnecessary dates and data that are burdensome to the students. Instead, the text gives attention to the historical understanding and the process. Besides, the text has provided ample information in order to understand contemporary affairs in the boxes throughout the text. We have endeavoured to project these issues as part of the experience of both the students and teachers. Members of the text book preparation committee dedicated themselves to prepare this text on international academic standards.

I acknowledge the members of the text book preparation committee for bringing this text successfully. I extend my gratitude to the Editorial Board, Translation Committee, Scrutinizers and Chief Advisors for their valuable suggestions in bringing out this text book.

I am grateful to Prof. G.S. Mudambadithaya, Officers and technical assistant of the Karnataka Text Book Society for their dedication in involving in the text book preparation project. I thank Dr. Shashikantha Koudur of NITK, Surathkal for his effort in editing the language in the text book.

Prof. Vijay Poonacha Thambanda
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HISTORY

CHAPTER-1

SOURCES

After studying this chapter you learn :

- about the sources required to study history.
- the different types of sources of history.
- the importance of archaeological sources
- to understand the importance of Halmidi inscription.
- that oral sources also support the study of history.

Why are sources necessary for construction of history?

What are sources? Sources are the basic materials necessary for the construction of history. They give details of a particular age.

Sources are the essential ingredients for the construction of history. They are very important for understanding the past events. History can be compared to a human body. Sources are like the skeleton of the human body. It follows that without sources, there can be no construction of history. The kind of source used determines the kind of view we get of history. This is the reason that there is no universal history. It is well known that there should be definite bases for all facts and events described in history. Sources can be classified into two groups.

1. Literary sources 2. Archaeological sources.

Literary sources are of two kinds.

1. Native Literature 2. Foreign Literature.

Archaeological sources are of three kinds

1. Inscriptions 2. Coins 3. Monuments

Literature produced by Indians is called native literature, and the sources comprising such literature are called native literary sources. Vishakadatta's 'Mudrarakshasa', Kalhana's 'Rajatarangini', Ashwagosha's 'Buddha Charita', Kautilya's 'Arthashastra', the 'Tripitikas' of Buddhist literature, Amoghavarsha's 'Kavirajamarga' are some of the literary productions which can be mentioned here.

The writings of foreign visitors, explorers and scholars comprise foreign literature and such writings are called foreign literary sources. Megasthene's 'Indica', Huien-Tsang's 'Si-yu-ki', Fa-hien's 'Fu-kho-ki', Ceylon's 'Deepavamsha' and 'Mahavamsha', the writings of Furneo Nuniz who visited the Vijayanagar Empire, and the writings of Barbosa and Nicolo Conti are some examples of this kind of source.

What are archaeological sources? Do you know about them? Archaeological sources are the inscriptions, coins, monuments, pots and pans, and other artefacts that have been obtained during archaeological excavations.

Study of Inscriptions

Inscriptions are the living fact-bearers of a particular period. They provide us information about religion, culture, economy, administration and other aspects of that period. The earliest inscription obtained in our country has been the inscription written by the Mauryan Emperor Ashoka. He got the inscription engraved on rocks slabs and stone pillars. Such inscriptions are found in many places in India. These are mostly in Bramhi script and Prakrit language. Some inscriptions have been found in Greek, Aramic and Kharoshthi languages too. Ashoka's inscriptions have been obtained in Maski and Bramhagiri in Karnataka. The first inscription available in the Kannada language is the Halmidi inscription. This was written during the reign of King Kakutsavarma of the Kadamba dynasty.

Study of Coins

Numismatics is the study of the evolution, nature and development of coins. Coins have been minted by using a variety of metals. These play a significant role in re-constructing history. They are valuable sources of information regarding the religion, culture, administration, social and economic aspects of the periods to which they belong.



Halmidi Inscription



Coins

Study of Monuments and Ruins

In every period, man's achievements have included material objects too. Stupas, basadis (Jain temples), temples, palaces, forts and ruins are the kinds of monuments which exist today. These monuments enable us to know about the civilization, technology, social and economic conditions of that period. They reflect the achievements of kings and administrators. Ashoka pillars, Ajanta and Ellora caves, the Elephanta caves, Badami, Aihole and Pattadakallu of Karnataka are evidences of India's glorious heritage.

Indian architecture is unique. Innumerable stupas, basadis, chaityas and thousands of temples have emerged throughout India over the centuries. A study of these helps us to know indirectly about the religious, political, social and economic life of that period.

Oral Sources

Today, many oral sources are being used to understand the diverse Indian heritage. From time immemorial, human society has preserved its experiences and memories in the form of lyrics, poems and songs, and passed them on from generation to generation. This tradition existed before the advent of writing. Indian history begins with this oral tradition. The Vedas survived as oral tradition for many generations after which they were put down in written form.

Legends

There are many legends relating to individuals, events and customs in many parts of India. Legends are also referred to as Stala-Puranas. Usually these do not provide direct information for the study of history. They reflect social beliefs. They also highlight the glory of certain individuals or the significance of a particular place. We generally come across stala-puranas relating to religious places.

Exercises

I Fill in the blanks with suitable words:

- 1 The two kinds of literary sources are _____ and _____.
- 2 Aswaghosha's literary source is _____.
- 3 The first inscription obtained in the Kannada language is _____.

II Answer the following questions in brief:

- 1 What are sources?
- 2 Give two examples for each of native and foreign literature.
- 3 What are archaeological sources? Explain with examples.

III Activities:

- 1 Discuss with your teacher how one event in history leads to another and forms a chain of events.
- 2 Visit a monument and collect information about it.
- 3 Collect antique coins.
- 4 Visit Archaeological Museum.

IV Projects:

Collect information about coins and prepare a small project report on it.

We must become the change we want to see.

- Mohandas Gandhi

CHAPTER-2

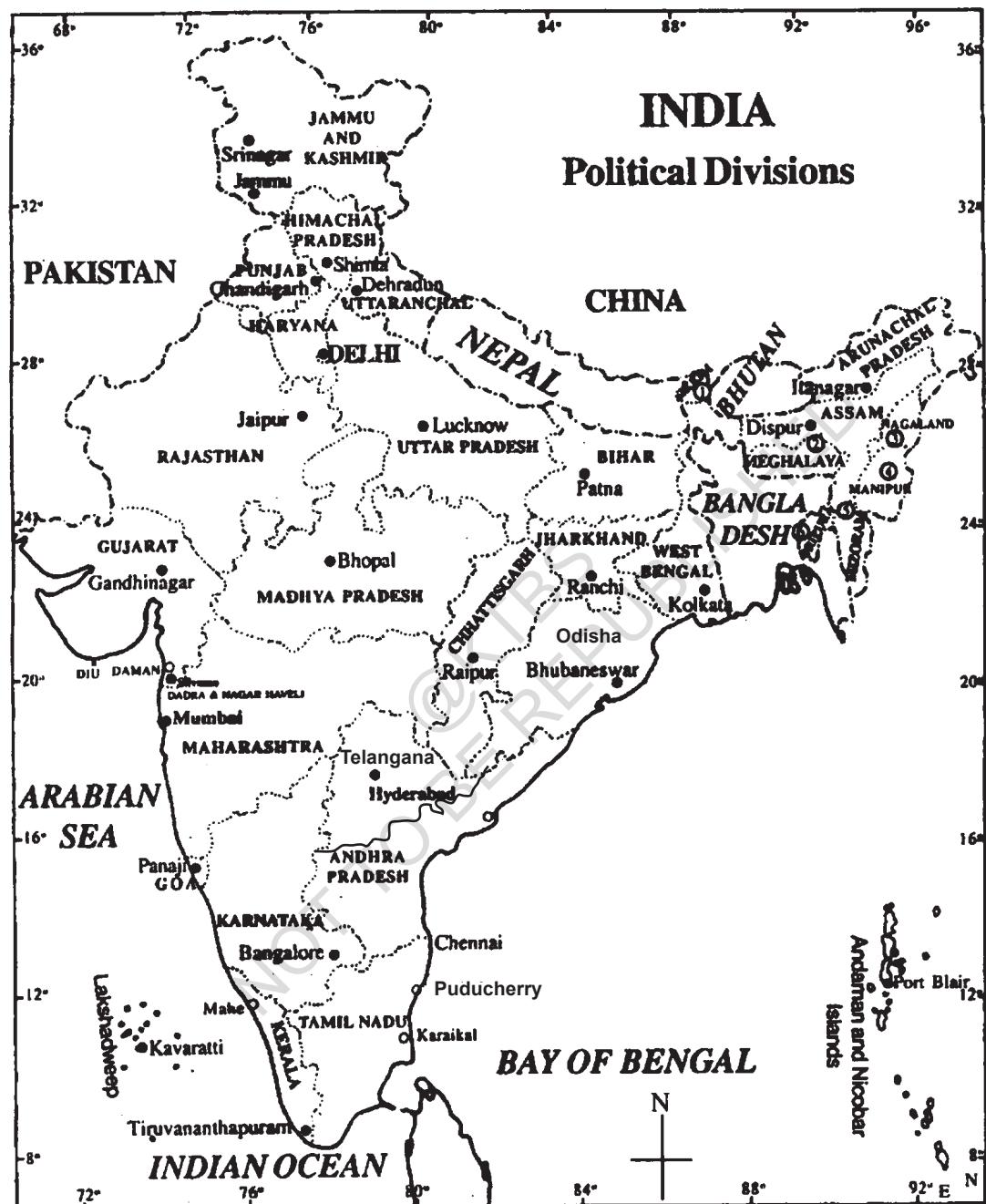
GEOGRAPHICAL FEATURES AND PRE HISTORY OF INDIA

After studying this chapter you learn :

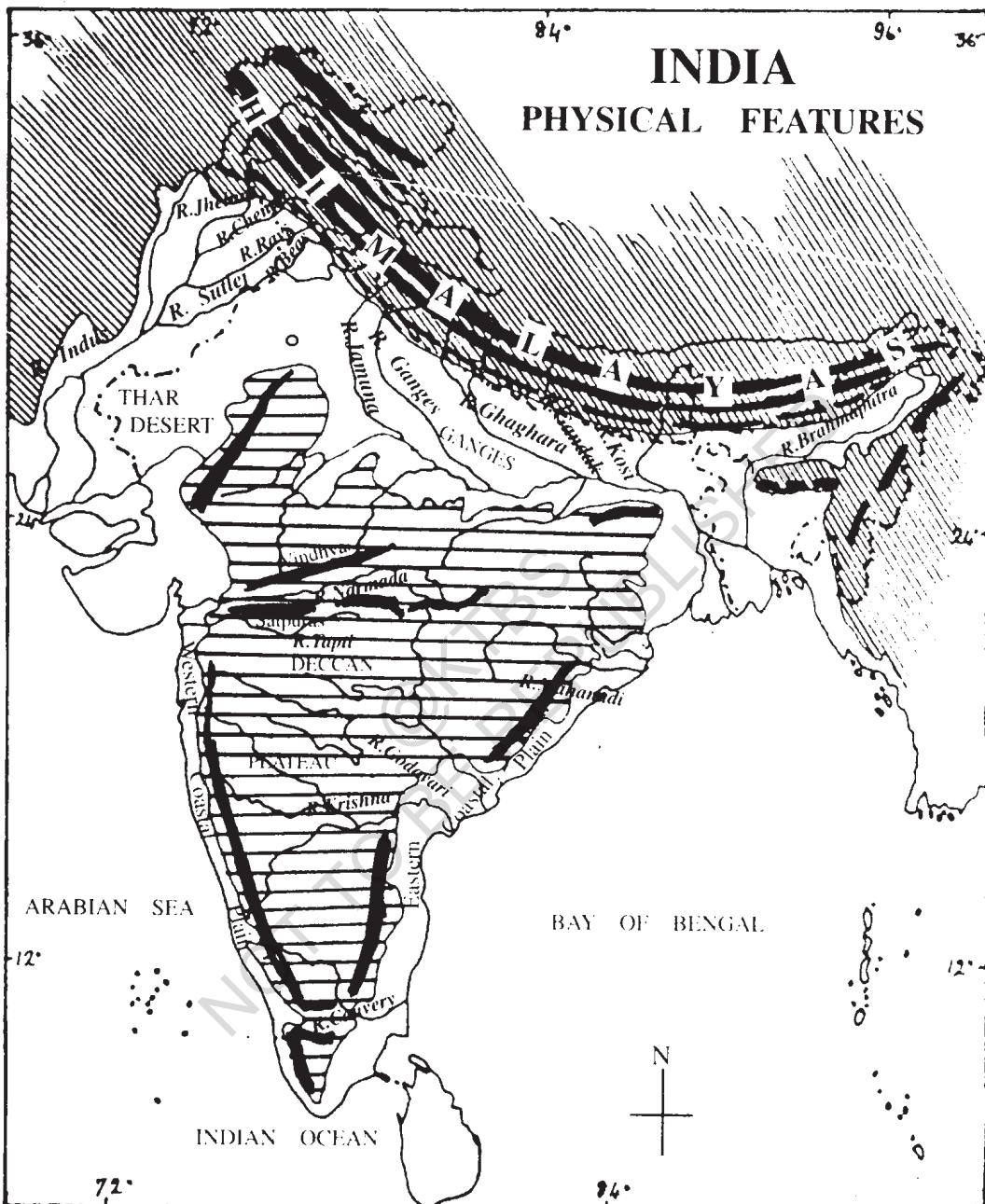
- about the physical features of India.
- that India is both subcontinent and peninsula.
- to recognise the neighbouring countries of India.
- about the living style of man in pre-historic period.
- about the stone ages of pre-historic period.

The geographical environment has influenced every country and race in the world. There is an intimate relationship between human life and the environment. Hence it is necessary to learn about the geographical environment in order to know about human history. India is a sub-continent occupying a huge area in the southern part of the Asian Continent. It is a peninsula, surrounded by water on three sides and land on one side. India shares its boundaries with Pakistan, Afghanistan, China, Nepal, Bhutan, Bangladesh and Myanmar. It consists of 29 states and 6 union territories and one national capital region (Delhi).

India's geographical features comprise the Himalayan range of mountains in the North, the Indo-Gangetic plain, the Deccan Plateau in the South and the Coastal region. The snow-capped mountains in the North include some of the tallest mountain peaks in the world. They help to preserve the safety and security of India. There have been a few intrusions into ancient India from the northern Himalayan region. The attacks have been mainly from the north- western side through the valleys of Bolan and Khyber passes. The flat Indo-Gangetic plains are an extremely fertile area. The ancient civilizations of Indus Valley and Vedic period flourished here. Many battles have been fought from time to time to establish control over this area. Usually, the dynasties that established control over this fertile gangetic plain also established empires in this area.



The Narmada river separates India into two - Malwa plateau or Central Highlands and the Deccan Plateau, in the south. The Mauryas and the Guptas ruled these two areas of ancient India. The Indian coastline is vast and stretches over 6,100 kms. The eastern coastline is called the Coromandel Coast, whereas the western coastline is referred



to as Konkan and Malabar coast. The numerous ports on this coastline had attracted the Romans from time immemorial. Foreign trade was carried on in those days only through sea-routes. Thus these ports developed and became the cause for the rise of powerful kingdoms in the South like the Pandyas, the Cheras and the Cholas.

The diversity in the Indian geographical environment has also influenced the lives of communities living here. Despite the communal diversity, there exist a cultural unity which binds all these diversities. Unity in diversity is the essence of this culture.

The Prehistoric Age

The period before the discovery of the art of writing is called the Prehistoric age. This is so because we do not find evidence to the linguistic development or to the use of script. We do not get any written records for the study of history of this period. Then how do we get to know about the people and their life in the prehistoric age? The scholars who study this period are called archaeologists. In this age, man was a nomad and indulged in hunting and food-gathering. Archaeologists have discovered some implements created and used by these people. Probably they used weapons made of stone, wood and bones. Among these, only weapons made of stone have survived today, providing us sources for study. Human beings in the prehistoric age used stone implements to peel the skin and separate the flesh and bones of animals, to scrape the bark of trees, and to cut fruits and roots. The people used to create handles out of bones and wood, and using them like spears and arrows, hunted animals. They used stones as axes to chop down trees and cut them up into logs. They might have used wood to build huts for themselves, or to make handles for their weapons.

Where did the Pre-historic man live?

The relics of the hunting and food-gathering man are available in Bimbetka, Hunasagi and Kurnool in India. There are many other sites in which such relics have been found. Most of these sites have been discovered along the banks of rivers and lakes. Furthermore, since stone implements were essential for the survival of people of that age, they chose areas abundant with stone which could fulfil their needs. Areas where people used stones to create various implements have been thought to be industrial sites.

How do we get to know about such industrial sites? Usually we get to see stone implements around rocky areas. People might have rejected some rocks as unsuitable for their implements. Heaps of broken rock

or stone-chips obtained during the creation of implements abound in such areas. It is possible that people lived for a long time in these places. These sites are called residential and industrial sites.

Awareness of fire

Signs of ashes have been obtained in the caves of Kurnool. They reveal the awareness and the use of fire by the people of the Stone Age. Probably fire was used for various purposes to cook food, for light and safety from animals.

Drawings found in caves

We get to see some drawings in many caves in which people lived in the Stone Age. Even today we can see the drawings done on the walls of caves and on rocks. Such cave-drawings can be seen in Madhya Pradesh, Uttar Pradesh and Karnataka. There are beautiful drawings of wild animals and of hunting.

The changing environment

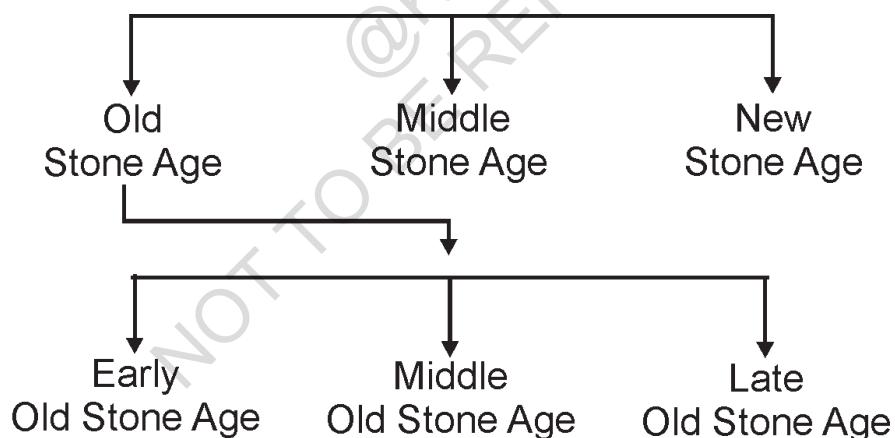
It is believed that 12,000 years ago a major change took place in the world's environment. The earth's temperature began to gradually increase. This led to the development of grasslands in many places. Birds and animals began to multiply in unprecedented numbers. Animals like deer, elks, goats, sheep and others prospered in these grasslands. Man who had been hunting animals, began to observe their nature, food habits and the way these animals multiplied. Over a period of time, he captured these animals and nurtured them. This was the way the practices of animal husbandry and dairy farming began. Man had by now, learnt to catch fish in streams and lakes. Human beings noticed in the meantime that some grass bearing grains had grown naturally. Man learnt to use them as food, the grains and cereals like rice, wheat and barley obtained from such plants. Gradually he learnt to grow them too.

Archaeologists refer to the age we discussed now, by different names. The age which prevailed 2 million years ago is the oldest age and is called the Old Stone Age, and it stretched over a period of 12,000 years. This long duration has been classified into three stages - the Early, Middle and Late Old Stone Ages.



Implements

Diagram showing the stages of the Prehistoric age



The period from 12,000 years to around 10,000 years is called the Middle Stone Age. The implements of this period are generally very small and hence they are called delicate stone implements. Man used to fashion handles from delicate stone for weapons made from bone and wood. He used those implements as axes and saws. Along with these tools, weapons of the old kind too continued to be used.

The New Stone Age began after 10,000 years. The stone weapons of this period are different from those of the earlier periods. These

weapons were bright and had sharp blades. People of this age used grinding stones for grinding leaves and herbs and for powdering grains and cereals. Some pots and pans of this period have been found, a few of which have been decorated. Pots were used for storing grains. They were also used for cooking rice, wheat and other grains and cereals. People of this age had learnt to weave cloth.

Exercises

I Complete the following sentences by using suitable words in the blanks:

1. Geographically, India is a _____.
2. Signs of ashes have been found in caves of _____.
3. The implements of the Middle Stone Age are called _____.

II Answer to the following questions in brief:

1. Describe briefly the geographical features of India.
2. What are the valleys through which the attacks on India have taken place?
3. What is meant by 'Prehistoric Age'?
4. How did animal husbandry and dairy farming evolve?
5. The different periods of prehistory have been given various names by archaeologists. What are they?

III Activity:

Visit a cave and learn more about it from your teacher.

I Was Willing To Accept What I Couldn't Change.

- Abdul Kalam

CHAPTER-3

ANCIENT CIVILIZATIONS OF INDIA

After studying this chapter you learn :

- about ancient civilizations of India.
- to analyse urbanization, special features of the cities, town planning, life style and the decline of towns.
- about the development of vedic period, life style during vedic period and post vedic period.

Nomadic life becomes stable

Archaeologists have come across signs of huts and houses in some places. They have excavated a cellar in Burzahom in Kashmir. People of those times used to dig shallow pits in the soil and live in them. There used to be steps leading to the pits. These were built in this manner in order to provide protection from the cold weather and wild animals. Earthen pots have been found inside and outside such pits. In accordance to the weather condition, people cook food either inside or outside.

There is a site named Mehrgarh near the fertile plain of Bolan pass which leads to Iran. The people of Mehrgarh were the first ones to have learnt the cultivation of barley and wheat crops and the rearing of goat and sheep. This is the first village to have come to our notice. The people of Mehrgarh lived in houses. Some houses had four or more rooms. Many sites have been discovered here which have not only the fossils of animals but also many graves. People and animals used to be buried together here.

The first urbanization

The ancient sites of Harappa were discovered by engineers when the railway lines were being laid 150 years ago in the Sindhu valley region of Punjab. They thought that it was a mound made of excellent bricks. They utilized the bricks for the construction of railway lines. In this way, many houses which had been buried under the soil, were destroyed. Subsequently, Archaeologists took up research in this area. They were convinced that it was an ancient city. Since the sites around this city resembled the sites discovered earlier, they were called the Harappan Civilization. These cities are said to be 4600 years old.

The significance of the cities

We can see two or more than two parts in the cities of Harappa. The western part is narrow and at an elevated place. Archaeologists are of the view that this was a citadel. The eastern part is wide and at a low level. This area has been called the Lower town. Every part had a wall made of burnt bricks. Since the bricks were placed in an interlocking manner, the walls were very strong.

There were note worthy buildings inside the citadel. Mohenjodaro, one of the cities, had a swimming pool. Scholars have called this the Great Bath. It is built of brick so as to prevent the seepage of water from the pool. The Bath has steps on two sides to go down, and has rooms all around. The water was probably supplied to the Bath by a well, and the used water was let out. Probably very important people took bath in this pool on special occasions.

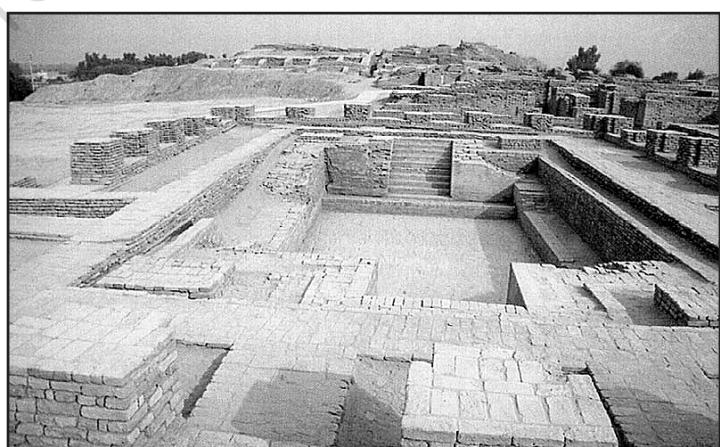
Fire alters have been discovered in other cities like Kalibangan and Lothal. Mohenjodaro, Harappa and Lothal had systematically constructed granaries.



Bronze dancing girl



Torso of a man



Mohenjodaro town bath tank

Town Planning

The lower town in the low lying area of the city was the place of habitation of the people. It was constructed in a very methodical manner. Systematically laid-out houses, roads and drains can be seen here. Almost every person lived in either one or two-storied house. The houses were built of brick and had strong walls. There were rooms all around the courtyard inside. The main door faced the street. None of the windows opened onto the streets. There were bathrooms in the houses. Some houses had wells which supplied water.

The cities had a neatly laid-out underground sewage system. The drains were built of brick and covered with stone slabs. The gutter of each house was linked to the main drain outside, and enabled the flow of dirty water from the house to the main drain. Holes were created in the drains to enable timely cleaning of them.

Town Life

Other than houses obtained during excavation found objects of metals and precious gems. Most of objects found were beads and seals. The layout of the town reveals the existence of administrative class. The people of this place had used expensive metals, gems and jewellery. The beads were probably used by the common people. There is an unknown script on the seals. This reveals that there was no dearth of literate people. This enabled the engraving of scripts on thousands of seals.

The people of Harappan culture had depended on agriculture and trade. Wheat, barley, pulses and mustard were their main crops. They had learnt to grow cotton and weave cloth from it. We can say that they knew irrigation since many towns were situated on the banks of rivers. They had domesticated the humped bull, cow, buffalo, sheep, goat, dog and hen, and were engaged in cattle-rearing, sheep-rearing and poultry. Oxen were used to carry heavy loads. Trade and commerce had assumed primary importance along with agriculture. The towns carried on business with rural areas. Baluchistan, Saurashtra and the Deccan were some of these areas. The seals obtained at Mesopotamia establish the fact that the Indus Valley Civilization had trade relations with it.

The decline of the towns

The administration in these places began to change some 4000 years ago. The walls of the Harappan fort were strengthened. Towards the final days of this town, its west gate was closed completely. The

legal system of the towns came under a lot of pressure. The spacious rooms of Mohenjodaro became smaller. Huge buildings turned into huts. Neither town planning nor road planning was systematic at this time.

Historians have given various explanations for the decline of these towns. Rivers that dried and changed course are said to be the cause. Other historians have cited the destruction of forests as the cause. Probably inundation by floods could be the reason for the vanishing of forests. People living in Indus valley and some sites of West Punjab might have deserted the area and migrated to new areas in the east and south. This civilization survived in Lothal town of Gujarat for some more years. Gradually, it synchronised with the culture of the later years. The Indus Valley civilization has remained a symbol of the pride of India and all our cultural roots.

The Vedic Age

The Vedas are the most important of the world's oldest literary source. There are four parts to the Vedas. They are Rig Veda, Sama Veda, Yajur Veda and Atharvana Veda. Among these, Rig Veda is the most ancient. It is about 3,500 years old. There are more than thousand slokas in the Rig Veda. They are called suktas. The verses in the Vedas are written in praise of God and are prayers to God. Agni, Indra and Soma are the Gods mainly referred to here.

The word 'Veda' denotes knowledge. Since Vedas have been orally transmitted from one generation to another, they are also called Shruti. The vedas consists of four parts: Samhita, Brahmana, Aranyaka and Upanishad. There are references to the religious, social, economic and political conditions of the period. In addition to the Vedas, there are six subsidiaries of the Vedas called Vedangas. They are Shiksha (referring to phonetics), Chhandassu (prosody or metre), Vyakarana (Grammar) Nirukta(Etymology) Jyotisha (astrology) and Kalpa (religious practices). There are four Upaveda called Ayurveda (relating to medicine) Dhanurveda (archery), Shilpaveda (sculpture) and Gandharvaveda (music). There are six Darshanas (schools of philosophy): Sankhya, Yoga, Nyaya, Vaishika, Uttara Meemamsa and Purva Meemamsa. All these together are referred to as Vedic literature. All these literary works are in Sanskrit language. There were many women scholars among the rishis in the Vedic period. They were called Brahmavadinis. Prominent among them were Apala, Lopamudra, Ghosha, Maithreyi, Gargi and Viswavara.

The vedas, as part of the oral traditions have been handed down for centuries by word of mouth. The priestly class which had memorised these, very systematically taught them their novices. It was only after a few centuries that they were given a written form. The Veds, Brahmanas and Aranyakas, form a transition from prehistoric phase to that of historic phase. Since we find from this period onwards the beginning of written tradition we call this as historic period. This is because, it is from this period that historian study literary sources along with the archaeological remains.

The Rig Veda and the religious texts that appeared after it are proof of the Vedic tradition which exists even today. The priests preserved the texts by chanting vedas as part of their daily lives. The Vedic culture has been shaped by the rules relating to performance of yagnas found in the Yajur Veda and the Atharvana Veda and by the spiritualism found in the Upanishads. We get information primarily about the numerous battles between the various tribes of that time, in the suktas of the Vedas. One of the tribes named Bharata had settled in the land between Satadru in east Punjab and river Yamuna. Later this area was called Aryavarta, and they called themselves Aryans. 'Arya' means 'noble' or 'respectable'.

Mention has been made of many leaders in these tribes. The most prominent among them is King Sudasa of Bharata tribe. He defeated confederacy of ten tribes in the north-western quarter. The Purus were the most powerful among the ten tribes. Their king, Purakutsa, died in the battle. Later both the tribes, Bharata and Puru, slipped into the oblivion. The fertile Ganga-Yamuna land which had till then been occupied by the Bharata tribe, now became the land of the Kurus. There were not only internecine fights in the tribes but also conflicts with other communities. The Aryans would unitedly fight against dasas and dasyus. There were herds of cattle with the dasas. They lived in areas inside forts which they called pura. Indra, famous for many battles had destroyed hundreds of such forts.

The other community which was the enemy of the Aryans was that of the Panis. They used to have constant conflicts with the Vedic class. They frequently captured the cattle of the Aryans. Many prayers in the vedas were for more cattle as also more sons and horses. The people waged battles in order to win more and more herds of cattle. Those who engaged in such battles needed sons to help them, thus they prayed for sons. The role of a horse was very significant in the battles. The people grazed their cattle and horses on grass lands. They used to quarrel for control over such regions.

The people believed that if they pleased the Gods, they could become owners of unbelievable wealth. This was the reason they offered a part of their wealth earned in the battles during yagnas.

We can see communities distinguished by their professions. They are the Brahmanas who engaged themselves in Vedic rituals, the Kshatriyas who assumed leadership during battles and those that engaged themselves in agriculture, animal husbandry and trade were the Vaishyas. To the above three varnas were added the shudras at the end of the Rigvedic period who formed the fourth varna. The leaders that we get to see at this time do not resemble the kings of later times. They did not have any capitals, palaces or systematic tax collection. They carried on the administration using the contribution given by the people and the wealth seized during battles. The leaders had organizations called the sabha and the samiti to advise them on administrative matters. The sabha had a broad representation of the people, whereas the samiti was a political organization having a few people engaged in specific administrative tasks.

The king was assisted by the Purohit, Senani and Gramini in administration. The post of Purohit was usually held by rishis. For example Vasishta, Vishwamitra and others were purohitis. The Purohit was a teacher, guide and philosopher to the king.

The head of the villages was the Gramini, and the head of the army was the Senani, and these two assisted the kings in all his activities. The whole community of people was called 'jana'. Even today in Kannada we call a group of people 'jana'. We get mention of many tribal communities like Bharata jana, Puru jana, Kuru jana and Yadu jana.

The basic unit of administration was the village and the Gramini was its head. A group of villages was called 'vish' and the 'Vishayapati' was its head. Many 'vishayas' came together to form 'jana' or 'Kingdom'. This was ruled by a king who would be called 'Raja', 'Rajan' or 'Gopa'. There were republics too, during the vedic period. Those who ruled over vast empires were called Emperors. These emperors were referred to by different names like 'Viraat', 'Ekraat' or 'Sarvaraat.'

The Later Vedic Age

We can see a gap of 1000 years between the Rig Veda age and the time of Buddha. During this period, the Vedic people had moved further east towards the Ganga river. The archaeological excavations at Hastinapur, Atranjikera and Kaushambi - relate to this period. Traces of painted grey pottery, copper tools and unbaked bricks are

found here. Prominent among the sources of this age are the Vedas, the Brahmanas, the Upanishads and the Epics. Scholars are divided in their opinion about the period during which the Mahabharata took place. The political and cultural centre at this time was Hastinapur, the capital of the Kauravas on the fertile Gangetic plain.

Over the ensuing years, the people moved to the eastern areas of Northern Kosala and Videha and settled there. These places acquired fame due to the presence of Rama and King Janaka respectively. But by the time of Buddha, King Janaka's Videha and his capital Mithila had lost their importance. In the place of these kingdoms, a confederacy of Vajjiyans had settled, among whom the Lacchavis were prominent.

The Vratyaas who did not believe in any Vedic practices, had settled in Magadha. Magadha had prospered in an unprecedented manner under the rule of the famous King Bimbisara during the time of Buddha. In later days, it flourished as the capital the empire. In this way, the people of the vedic period had spread from the Yamuna to the tiny kingdom of Anga on the Bengal border. The Yadavas had settled in Mathura near Yamuna. According to the epics, the Yadavas had reached Saurashtra under the leadership of Krishna. During this age, the vedic people had built small kingdoms with capitals and established administrative systems. The power of the king was under the control of Brahmins and traditions. The old tribes adapted themselves to the changed situations and existed for hundreds of years as ganas and ganasanghas.

Yagnas and yagas played a significant role during these times. In order to win the people's respect, kings performed yagas like Rajasuya, Vajapeya, Sarvamedha and Ashwamedha and came to be called Samraats.

On the occasion of the Ashwamedha yaga a special horse belonging to the king would be let loose. A troop of specially-trained soldiers would follow it. Whichever land the horse wandered into, the king of that land would accept the sovereignty of the horse's owner and pay tributes to him. If anyone stopped and tied the horse, that act would be seen as a challenge and a battle between the two kings would follow. In this manner the horse would return after one year having victoriously conquered all the territories. It was then that the Ashwamedha yaga was performed. It was the desire of most of the kings to perform such a yaga.

People in the later Vedic age knew the use of metals like gold, silver, copper, bronze, tin, lead and iron. Using implements made of iron, they would cut down the forest and extend the towns. Weapons made from iron were used to tame elephants. The people had learnt cultivation of rice. We get to see many professions and trades during this age. We get descriptions of goldsmiths, basket-weavers, rope-weavers, cloth-weavers, carpenters and potters. Mention is also made of servants, astrologers, fluteplayers, dancers and merchants. In this fashion came a unique cultural development which began to inhabit in India.

Exercises

I Complete the following sentences by using suitable words in the blanks:

1. The site near the fertile plains of the Bolan Pass is _____.
2. Archaeologists discovered the town of _____ about 90 years ago.
3. People in the Harappan Civilization depended on farming and _____.
4. The oldest Veda is _____.
5. The most famous king of the Magadha dynasty is _____.

II Answer in brief the following questions:

1. Describe the special features of Harappa town.
2. Write a paragraph about the Great Bath in Mohenjodaro.
3. How was the town planned?
4. Name the Vedas.
5. Which were the yagnas and yagas common during the Vedic Age?
6. Describe the occupations of the people in the Later Vedic Age.

III Activities:

1. Prepare a Project on Mohenjodaro and Harappan Civilization.
2. Read stories from the Upanishads.

CHAPTER-4

ANCIENT CIVILIZATIONS OF THE WORLD

After studying this chapter you learn about :

- the great civilizations of the world - Egypt, Mesopotamia and China.
- Art, architecture and life style of different civilizations.

Many other civilizations flourished in various parts of the world at the time of Indus Valley Civilization. We can see the Egyptian civilization, Mesopotamian civilization and Chinese civilization in Asia and Africa.

The Egyptian Civilization

Generally all civilizations have originated in river valleys. The Egyptian civilization could take birth due to the presence of the river Nile. The relics obtained here proclaim the grandeur of Egypt. Huge pyramids, sculptures, temples and the inscriptions in these temples tell us a lot about Egyptian culture and history.

The Contribution of Egyptians

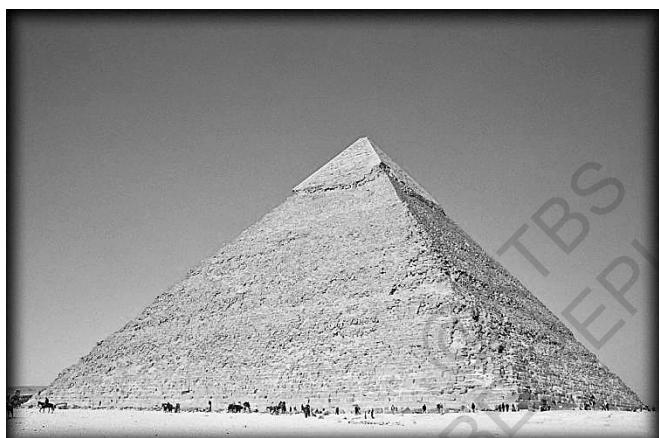
The Egyptians were expert farmers. They knew a lot about irrigation. They had built temples. They invented the calendar which has helped us to measure time. More than anything else, they had mastered the art of writing. It was a symbolic language. It consists of small drawings and has been called hieroglyphics (sacred writings).

The Nile Valley

Every rainy season, the Nile river would transform the Nile valley into a huge lake. After the valley dried up in summer, a fertile layer of clay soil would form the grazing field and neighbouring agricultural lands. The work that would need the labour of hundreds of people, was being done by the kind river all alone. This fertile land provided food for the population of the first town in the area. Not all agricultural regions were in the valley. Hence it was through small canals and wells that they were responsible for the development of a complex system of irrigation through out the land.

The prosperous, wealthy Egyptian peasants and citizens in their leisure engaged themselves in the creation of artistic works. The role of priest was created to interpret nature and explain it. The priests were scholars and shouldered the responsibility of protecting written

documents. They believed in life after death. They believed that man had to give an account of his deeds on earth to Osiris, the most powerful God of Life and Death. The priests considered that life on earth was temporary and was needed only to prepare for the next life. Thus the whole of the Nile valley was reserved for the dead. The dead body would be smeared with various chemicals and wrapped with a thin cloth. The entire body was in this way preserved. The body protected thus was called a 'mummy'. It would be kept in a specially designed coffin. The grave was considered the true 'place' for an Egyptian. Hence all around the dead body, items needed for daily use and small dolls of a cook and barber would be kept to fulfil all future needs.



Pyramid

In the beginning, graves were created by carving into boulders on the hills. As the Egyptians moved north, they had to construct graves in the desert itself. Tall towers were built on these graves using huge blocks of stone in order to protect the eternal sleep of the dead. Kings and wealthy people vied with each other to build taller and taller towers.

The Greeks called these

structures 'Pyramids'. The kings of Egypt were called 'Pharaohs'. 'Pharaoh' means 'a person who lives in a palatial house'. The peasants who had accepted the rule of powerful Osiris, now accepted the rule of Pharaohs too.

After an independent, prosperous life for twenty centuries, Egypt was ruled over by an Arabian shepherd tribe called Hyksos which attacked it and after defeating it, ruled for 500 years. They looted the wealth of the natives, and hence did not become popular. The Jews who came wandering through the deserts in search of shelter were also hated by the people of Egypt. By cooperating with the foreign rule the Jews even assisted them in collecting taxes and in administration.

In 1700 B.C. the people of Thebes rose in revolt against the foreigners. After a prolonged conflict, they succeeded in driving Hyksos out of their country. Egypt became free once again. After a thousand years, it came under the rule of Sardanapalus of Assyria.

The Persian Emperor Cambyses occupied Egypt in the 6th Century B.C. Alexander occupied Persia in the 4th Century B.C. Egypt became a province of Macedonia. One of Alexander's military generals declared himself the King of Egypt and established the dynasty of the ptolemies. He founded the city of Alexandria. At last came the Romans in 39 B.C. The last Egyptian queen, Cleopatra, tried her best to save her country. It was said that the Romans feared her beauty more than her troops. Twice she was successful in her attack upon the hearts of the her Roman conquerors. However, in 30 B.C., Caesar's successor, his son-in-law, Augustus, did not succumb to her beauty like his father-in-law, but defeated her army, though he spared her life. When he planned to carry her away along with the other spoils of the battle, Cleopatra consumed poison and ended her life. From then onwards, Egypt became a province of Rome.

The Mesopotamian Civilization

Mesopotamia is an area which lies in a valley between two rivers. Many of the places described in the Old Testament can be seen here. The land which inspires awe and fascination is called the 'Land between the rivers' or 'Mesopotamia' by the Greeks. The two rivers, Euphrates and Tigris, have made this West Asian barren land very fertile. It was the fertility of this area that attracted the people to it. Since food crops could be grown with little effort, the northern hilly tribes and the southern nomadic tribes of the desert tried to establish control over this area. The rivalry between these tribes led to number of endless conflicts. However, in the midst of these conflicts, there emerged a civilization of strong and brave race. The Sumerians were the first ones to evolve a system of writing in Mesopotamia. For 30 centuries all those who entered the fertile valley – Sumerians, Babylonians, Assyrians and Persians – used this system of writing, which was called Cuneiform.

The most important area of this civilization was the southern part of the valley between the Euphrates and Tigris rivers. From olden times, this area had been referred to as Babylonia. The northern part of Babylonia was called Akhad and the southern part Sumer. The northern part of Mesopotamia was known as Assyria.

The Hanging Gardens of Babylonia

The legendary Hanging Gardens were created on the banks of the river Euphrates around 7th Century B.C. This was one of the seven wonders of the Old World. But it is surprising to note that the Babylonian cuneiform records which make a mention of the city, its palaces and its walls, are totally silent about the Hanging Gardens. Most of the scholars are of the view that King Nebuchadnezzar II was the one who created the gardens.

Nebuchadnezzar's wife Amitis was from Mead. It is said that Nebuchadnezzar got the gardens built in order to console his wife who was missing the beautiful environment of hills, trees and flowers of her motherland. Some scholars Opine that the gardens were created by Assyrian queen Sammu-Ramat. In reality, the gardens did not hang in the air. The trees and bushes were grown at different levels (or terraced land) of the ziggurats. When the branches hung at different levels and swayed, they gave the onlooker an impression of being a hanging garden. The Euphrates provided the water for these gardens.



Ziggurat

The history of Mesopotamia is a story of end less hatred and conflict. The Sumerians, the hilly tribe from the north, were the first to come here. They who used to worship their gods on top of the hills, after coming to the plains, built artificial

hills and established their places of worship there. These were called Ziggurat. They did not know to build stairs and therefore surrounded them with sloping galleries. The Jews called these the Towers of Babel.

The Law Codes of Hammurabi

The main source of the law codes of Hammurabi are the rock edicts found in 1901. Today this has been kept in 'The Louvre' museum of Paris. Hammurabi's law enforced the logic of 'An eye for an eye and a tooth for a tooth'. Hammurabi's Law Codes are one among the most ancient of the codes available to us. They were probably written to protect the rights of all sections of Babylonian society, especially women and slaves.

The Sumerians had entered Mesopotamia in 4000 B.C. Later they were overpowered by the Akkadians, one of the tribes of the Arabian desert. These are known as Semites. After a thousand years, these

Akkadians came to be ruled over by the Amorites, another Semitic tribe. The most famous king of the Amorites was Hammurabi. He got built a fabulous palace for himself in Babylonia. He framed the codes of justice and made Babylonia to be considered the best-administered kingdom in the whole of the Old World. The Hittites who came later, occupied the valley and destroyed all that they could not carry away. These Hittites were defeated by the Assyrians who were the followers of 'Asura', the desert God. The Assyrians occupied the whole of West Asia and Egypt till about 7th Century B.C., and collected taxes from all the people there. Another Semitic tribe, the Chaldeans, re-established Babylonia in the 7th Century B.C. and developed it into a prominent capital of that time. Nebuchadnezzar was the greatest king among them. He encouraged the study of science. But the Chaldeans came under the attack of the Persians in the 6th Century B.C. Two hundred years later, Alexander transformed this place of the Semitic peoples into a Greek province. After the rulers of the Romans and Turks who followed Alexander, this civilization declined and turned into a wilderness.

The Chinese Civilization

It is a special feature of all ancient civilizations that they were established on river valleys. The Chinese civilization was no exception to this. But the river which led to the establishment of the Chinese civilization was known as 'China's Sorrow'. This was the Hwang Ho river. After the floods this river changed its course in an unpredictable manner and inundated houses and agricultural lands. It would render all the canals useless. This was the reason the people of that area referred to it as the 'Symbol of Sorrow'.

According to excavations, the first ruling family of the Chinese civilization was the Shang dynasty. It ruled in the period between the 18th century B.C. and the 12th century B.C. Under the rule of this dynasty, the people had developed a wonderful culture by the 14th century B.C. The Shang dynasty was overpowered by the neighbouring Chau dynasty. The Chau dynasty continued the good traditions of the Shang culture and ruled till 250 B.C.

In the Chou dynasty there was a section of officials below the kings. The king allotted portions of land to the officials. In return for that, the officials supported the king during battles. In the social stratification, the communities in the next level were the merchants and craftsmen. Apart from them we can find a great majority of peasants as well. In the lowest strata of social hierarchy were the slaves. The prisoners of war were made slaves by the kings.

The Great Wall of China



The Chinese Empire consisted of many small provinces. Seven big states were created bringing these smaller provinces under them. Every state that was created thus, constructed a wall along its boundary for protection. Emperor Qin Shihuangti ordered that the walls of the northern Chinese states be connected. This enabled the northern walls to ward off the attacks of invaders from the north. The construction of the great wall began in the 7th century B.C. and continued till the 16th century. The worn-out parts were repaired and strengthened. When the work was completed it stretched to more than 5000 kilometers. It is one of the seven wonders of the world.

The Shang kings spent quite an amount of time in conquests and battles. Hence the army was in prominence. The soldier enjoyed a dignified place in society. Soldiers wore bronze helmets and metal armours. The bronze daggers, axes, bows and iron-tipped arrows which they used have been found. The people of the Shang dynasty depended on agriculture. They had a well-organized system of irrigation. They used to grow plenty of rice.

Porcelain

It is believed that porcelain originated in China. Semi-porcelain objects were in use from 1600 B.C. By the time of the reign of the Han dynasty (200 B.C.), glazed porcelain had been developed. It had developed into an exotic art. The ancient Chinese used to bury their dead along with porcelain pots, animals and the objects loved most during their lives.

The Chinese used to wear thin cotton dresses. They used silk too, and engaged in silkworm-rearing. Silk-manufacturing was a prominent industry. The Chinese used to make excellent pots, and had learnt to make various objects from porcelain. It was a custom of the Chinese to worship their ancestors. They believed that a dead man became a spirit and that the spirit had special powers. The dead body was buried along with various wooden articles, pots, bronze vessels and other objects. The tombs of kings used to be quite large. The Chinese tradition of writing began with pictures and got transformed into an ideographic script. Writers used to write on silk and bamboo slips. Porcelain and the Great Wall are the exceptional contributions of this culture.

Exercises

I Complete the following sentences by using suitable words in the blanks:

- 1 Hieroglyphics are called _____.
- 2 The kings who ruled Egypt are called _____.
- 3 The Greeks referred to Mesopotamia as _____.
- 4 The most famous king of the Amorites is _____.

II Match the following:

A	B
1 Hwang River	a Mesopotamia
2 Cuneiform	b King of the Amorites
3 Cleopatra	c Shang
4 Hammurabi	d China
5 Chinese dynasty	e the last Egyptian queen

III Answer in brief the following questions:

- 1 How are 'mummies' preserved?
- 2 Write a paragraph on the Pyramids.
- 3 How was 'Hwangho River' China's sorrow?

IV Activity:

- 1 Collect information about the Nile river.

CHAPTER-5

GREEK, ROMAN AND AMERICAN CIVILIZATIONS

After studying this chapter you learn :

- the development of Greek civilization and their contributions to world culture.
- the development of Roman civilization and their contributions.
- Ancient columbian civilization in America Maya, Aztecs and Inca.

Greek Civilization

The Greeks came from the north to the region of the Aegean sea. These tribals who were mainly shepherds, came in search of grasslands. Every group which came in this manner had a distinctive name: the Acheans, the Ionians and the Dorians. These people called themselves Hellenese or the Greeks. The Greeks originally belonged to tribes. There used to be a king looking after many tribes. The people used to engage in agriculture and animal-husbandry. They also used to engage in making pots, swords and ornaments. Trade was through barter system. Battles and conquests formed adventurous activities of their lives. The Greeks believed that their Gods lived on Mount Olympus. They prayed for good harvests and success in their various activities. There were no priests among the Greeks. The king prayed on behalf of all the people.

The Greeks were not aware of writing till the 9th century B.C. Hence they preserved the accounts of their experiences, the exploits of their leaders and descriptions of battles through oral tradition. Homer wrote two epics, the Iliad and the Odyssey. These epics describe the life and institutions of the time. 'The Iliad' narrates the siege of Troy and its destruction. The Odyssey in great detail deals with the adventures of Odysseus while on his return from Troy. The Greeks formed citystates in the 9th century B.C. Athens, Sparta, Macedonia and Thebes were some of the city-states.

In the beginning, monarchs ruled over the city-states. But later the wealthy land-holders seized power and abolished monarchy. Due to trade, commerce and industry, a rich middle class took birth in the cities. They, along with the poor farmers, attempted to limit the power of the land owners. This conflict led to the rise of the dictators whom

the Greeks called 'the tyrants'. Gradually these tyrants were thrown out and democracy and oligarchy were brought into practice. Democracy practised here was different from the one practised today.

In the 5th century B.C. Athenian democracy became entangled in two wars and lost its glory. The first war took place against Darius the Persian Emperor. When Darius invaded Greece for the first time, all the Greeks came together and fought victoriously. After ten years, though the Persians again returned and burnt down the city of Athens, they could not win the war.

Alexander

He was the king of Macedonia in Greece. In his short lived life, he set out to conquer the whole world. He was successful in building a huge empire. He defeated the Persian army and advanced towards India. Aristotle, one of the greatest scholars of Greece, was his teacher. After fighting on the Indian borders while on his return to Greece, Alexander died at Babylonia in 323 B.C.

The second war is the Peloponnesian War. This war took place between Athens and Sparta, and led to the defeat of Athens. The Athenians came under the control of the Spartans. The Peloponnesian war heralded the last days of Greek glory. From the very next year, mutual conflicts took place between the city-states, and the Greek kingdom began to collapse.

Slavery was practised in Greece. This enabled the Greeks to enjoy leisure time and engage in various arts and luxury. Their Olympic Games were popular games played once every four years. Importance was given to different arts in Greece.

Olympic Games

The Olympic Games began in Greece in 776 B.C. The Games, which were held once every four years, were also used for measurement of time. They used to be arranged in Olympia in Illis area as part of the Olympic festival. This festival was celebrated in honour of the peace pact between Illis and Pisa city-states. In the beginning there were only running races. This race over 200 metres was called 'stadium'. Thus the term of measurement of distance was 'stadia'. An olive branch used to be placed on the head of the winner in the race. The Olympic Games were held for more than a thousand year. They came to an end when the Christian Emperor of Byzantine Theodossus banned them in the 4th century A.D. The Olympic Games were revived in the 19th century under the initiative of France. The first Summer Games in the modern age were staged in 1896 and the Winter Games in 1924. Even today olympic games are conducted once in 4 years.

Socrates, Plato and Aristotle are famous Greek philosophers. Pythagoras and Euclid contributed significantly to the field of mathematics. Hippocrates laid the foundation for study of medicine. Even today, doctors take the Hippocratic oath before beginning their medical practice. The Greeks made significant contributions in the field of architecture too. Sophocles wrote world famous plays like Oedipus Rex, Antigone and Electra. Euripides wrote dramas which satirized the concept of war, and depicted slaves and ordinary people in sympathetic light. It was the Greeks who for the first time attempted to write history. Herodotus is considered of the first to have analyzed history. Thucydides and Plutarch were noted Greek historians of that time.

Socrates

Socrates was the philosopher who taught the Western world to think logically. Socrates was renowned for intellectualism and rationality. He gave a philosophical basis for early Greek thought. He believed in political, social justice, morality, religion, patriotism, democracy, humanity and ethics. His life was a struggle of suffering and adventure. His intellectualism was mainly ethical. 'Knowledge is virtue: virtue is knowledge' – this was the foundation of Socratic thought. He did not develop his philosophical thought within four walls. He used to carry on his intellectual exercise in the form of questions and answers with strangers in crowded areas of market-places, shops and streets. Such thoughts of Socrates teaching enraged some Athenians and he earned their hatred. Some prejudiced people heaped various accusations on him in order to have him punished. As a result, the jury sentenced him to death and threw him into prison. One month later the jury decided to give him hemlock. Socrates told his students, "I'm not afraid of death, but I'm afraid to go against religion and truth". On the final day, a jail attendant brought him the cup of poison. Socrates drank the poison and left his earthly abode.

Plato

He is one of the famous philosophers of Greece. He was a disciple of Socrates and advocated ideas of social justice and ethics, among others. He was the architect of the idea of 'Ideal Republic'.

He was disturbed by the life around him when the city of Athens was in danger. In order to avoid social and political disintegration, he advocated ethics, philosophy and education with respect to society and the nation. He was a staunch supporter of education and started a school named 'The Academy' in Athens. This became famous as the first University of Europe.

Significant among Plato's writings are The Republic and The Text and History. Socrates, Plato and Aristotle have been ancient Greece's most important philosophers. Plato's thoughts are capable of influencing even the 20th century political views. Plato left Athens after the death of Socrates and travelled to Greece, Egypt and Italy. He was a scholar who distinguished himself not only in the field of Political Science but also Mathematics and Jurisprudence.

Aristotle

As a Greek thinker Aristotle is as important as Plato in western philosophy. He was Plato's pupil. Socrates and Plato had a deep influence on his thoughts. Aristotle is considered the father of Political Science. As he was a tutor and an admirer of Alexander, a few people being prejudicial opposed him. Enemies increased in number. Faced with no alternative, Aristotle committed suicide by consuming poison. The structure and nature of an ideal state, the status of women, slavery, the extent of property, citizenship, education, revolution, socialism and democracy were some of the thoughts that Aristotle has discussed. His philosophy can be considered as the development of Plato's philosophy. As a complement to Plato's institution, Aristotle established an educational institution named 'Lyseum' in Athens. "I have great regards towards my teachers; but I have greater regards towards Truth than my teacher", was his discourse to his pupil. He studied greek medicine and botany. He had a deep understanding of investigative habit in research. He became Plato's disciple at the age of seventeen. Being influenced by Plato he was aware of ethics, aesthetics and early Greek philosophy. It is because of these reasons that he was a close associate of king Alexander.

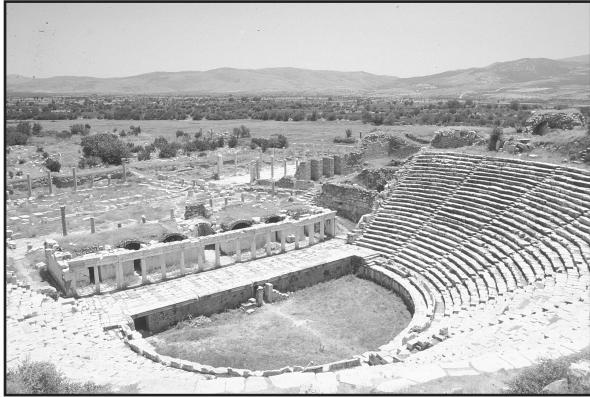
Roman Civilization

We can see the relics of ancient Roman civilization in present-day Italy. The original inhabitants of Italy were the people of North Africa, Spain and France. They migrated to Italy around 4000 years ago. After some time, the Greeks and Etruscans came and settled here. The Italians are the descendants of these people. The Italians learnt the language, religious beliefs and art from the Greeks.

Rome was under the rule of a monarchy. The Romans had 'Assembly' and a 'Senate', as two political advisory institutions. The Assembly was made up of all middle-aged men, whereas the Senate was an elite institution which was very influential. The Senate had the power to reject the proposals of the Assembly and the king. In the 6th century B.C., monarchy was abolished and a republic was established. Around 3rd century B.C. the administration of the whole of Italy came under the republican states. Even under the Roman republic, the Senate and the Assembly continued as advisory institutions. The members of these institutions headed the armies during war. They enforced the law and dispensed justice.

There were two classes in the Roman society: the Patricians and the Plebians. The Patricians were the elite in society. They were land-owners and formed the upper class. It is they who controlled the Senate. The Plebians were the common people. They were the ordinary workers, small land-owners, artisans, small traders and soldiers. Their rights were limited. They were meant to pay taxes, and to undergo punishment. The decisions taken by the Council and the Senate regarding the Plebians could be rejected by the Tribunes. In the 5th century B.C. the Plebians rebelled against this system. As a result, the Patricians granted them some concessions. Thus the Plebians got the right to choose the members of the Tribunes. It was around this time that a rule-based on 'Roman law' was established. This provided awareness over their rights and learnt to oppose the violation of their rights.

A desire for expansion exposed the Romans into newer conflicts. Hence they battled with Carthage, a coastal town in North Africa. Sicily was a fertile area. The Romans fought for control of this area for 118 years. These wars are referred to as the 'Punic Wars'. The Carthagens were defeated in this war. By early 1st century B.C., the Romans had conquered Greece, parts of Asia and Egypt.



Amphitheatre

Conquests and victories had enabled Rome to acquire vast wealth and riches. Rome won over a lot of gold and innumerable slaves. Rome not only had Patricians and Plebians but also had slaves. The slaves did not have the rights of citizenship. They were the private property of their owners.

Slaves were also sold. There

were instances when the slaves secured their freedom under special conditions. The Romans who had immersed themselves in status egos used the slaves as gladiators. They amused at the combat of the gladiators from the amphitheatre. A majority of the slaves and prisoners lost their lives in such games.

Gladiator

The wrestlers of ancient Rome were called Gladiators. There were both expert and amateur wrestlers among them. The fights were organised to entertain the 'civilized' spectators. These fights which were fought between human beings, and sometimes between human beings and animals, ended in gruesome deaths of the participants. The place where the combat between the gladiators were fought were called 'Amphitheatre' and 'Colosseum'. Criminals, slaves and prisoners-of-war who had lost their citizenship rights were taken as gladiators. Gladiators on acquiring fame and wealth were sometimes given freedom. Recently, a film titled 'Gladiator' has become famous world-wide.

Over a period of time the chaos engulfed the Roman state. Now rebellions and assassinations took place. Bribery and corruption during elections became the order of the day. At this juncture, around 60,000 poor and exploited slaves rose in rebellion under the leadership of Spartacus. One year after their struggle they were ruthlessly suppressed. Around 60,000 people were crucified at this time.

The Generals on account of continual wars reduced the authority of the senate to insignificance. Pompey and Julius Ceasar are prominent among the hundreds of such military generals. These two vied with

each other and finally Caesar emerged victorious against Pompey and tried to become a dictator. The result was that Brutus and his associates assassinated Caesar in the premises of the Senate. Later on, the authority was passed on to Julius Caesar's nephew, Octavius. He took revenge against those who conspired in the killing of Caesar. With Octavius, the republican form of government came to an end. Octavius ruled under the title Augustus. He called himself 'Princep' too. 'Princep' meant 'The First Citizen of the State'. He introduced many reforms and ruled for 44 years. The kings who came after Augustus were dictators. The Senate lost all its power. The king assumed supreme power and became a tyrant. From here onwards, we see the deterioration of Rome.

Each culture is responsible for the development of its language. The Roman reign was responsible for the development of the Latin language and literature. Rome also gave rise to distinct architecture. The Pantheon is a temple, whereas the Colosseum is an auditorium. Roman sculpture has been inspired by the Greeks, and is full of life. On account of the birth of Jesus Christ and the religion that he preached Rome acquired prominence.

The American Civilizations

Maya, Aztec and Inca are the ancient Columbian civilizations of America. They represent the culture of the Indian aborigines of America. The countries of medieval Europe discovered new continents in their attempts to find out a new sea-route to India. America and Australia thus discovered were misunderstood as India and their inhabitants were called Indians. Thus, the aborigines of America and Australia came to be called Indians. In later history, the familiar countries came to be known as the Old World and the newly discovered continents as the New World. The ancient Columbian civilizations of America are distinct and special like the civilizations of the old world like the Egyptian, the Mesopotamian and the Chinese civilizations. We can see states, kingdoms, amazing monuments, cities, art, metallurgy and the practice of writing in the civilizations of the new world too.

The nomadic people of this area settled around 1500 B.C. They grew maize, cereals, fruits, pepper and cotton. The early villagers knew how to weave cloth, make pots and do other things like the people of the Neolithic age (or the New Stone Age). The beginning of the construction of pyramids and commemorative stone idols in the period between 1200

B.C. and 900 B.C. brought new changes in the hitherto simple lives of these people. These changes were first noticed in coastal Mexico. The commemorative idols depict leaders and kings. These are called Olmec. The evidences and the excavations found here reveal a centralized society with a hierarchical system. Gradually, vast kingdoms, capital cities and villages sprung up around this area. Even here the Olmec style of art was made use of. In this way, cultural boundaries were drawn for the first time and unity developed among the people therein. After 500 B.C. the Olmec unified style led to separate local styles and regional states. These are the Maya, Aztec, Inca and other civilizations.

Maya Civilization

The American-Indian aborigines of Yucutan area of Mexico are called the Mayas. Their language is called Yucutec. Physically, the Mayas were short, brown complexioned, long-haired and generally round- headed people. The Mayas were the most advanced among the ancient American Indians. The ruins of cities built of stone have been obtained in Yucutan of Mexico, Guatemala and Honduras. This civilization rose to its cultural height around 1700 years ago. Their earliest cities were built around 320 A.D. We see the dissolution of Mayan culture with the attack of Spain from 1527 to 1546 under the leadership of Cortes. A few descendants of Mayan Indians who survived these attacks can be seen even today in the Northern areas of Yucatan and Guatemala.

The life of the Mayas

The settlements of the Mayas included huge ceremonial centres. These have been called cities but they were not inhabited by people. These areas were utilized for religious ceremonies, markets, courts and city administration centres. People lived in villages around these areas. Except during the period of markets and religious celebrations, these ceremonial centres would be deserted at all times. Around a large site named Tikal, pyramids, 'palaces' and courtyards have been found all around stretching one square mile.

In all ceremonial centres and on either side of the courtyards, there used to be pyramids. Beneath them were buildings with many rooms. In front of these, there used to be mammoth stone pillars, of which a few were plain pillars. Usually depictions of gods, priests, important leaders in administration and hieroglyphic writing would be carved on these

pillars. Such stone figures are called Steles. The largest among these is approximately 35 feet high and weighs 65 tons. There were temples on top of the pyramids. The people used to assemble in the courtyards and watch the rituals held in front of the temple. Gradually, by about the 9th century, people abandoned these ceremonial centres. For the next six centuries, these areas did not enjoy much of an importance.

The ordinary Mayas lived in huts on the outskirts of the ceremonial centres. There used to be maize fields all around. The farmers grew maize and yam among others. The labour of innumerable peasants were utilized here to construct huge structures.

The noteworthy intellectual achievements of the Mayas can be seen in their writing (the hieroglyphs), astronomy and their use of the calendar. Their hieroglyphic writing is based on ideographic symbols and sounds. There are around 850 characters. The meaning for most of these are not known. These hieroglyphic texts have been carved on stone memorials, structures and on logs of wood. They were also written in books. All except three books were destroyed during the Spanish conquest. One of these, the Dresden Codex was used to predict the dates of eclipses.

There is no evidence of the use of metal among the Mayas. Even in early 16th century, copper and gold were rare. They used tools made of stone, bones and wood. Till the 9th century, they were not aware of the use of bow and arrow. The gods pertaining to the maize crops were the presiding deities for the Mayas. They treated Rain, Soil, Wind, Sun, Moon and the Maize itself as their gods. Throughout their history the Maya practised human sacrifice on a limited scale.

The Aztecs

Texcoco is a lake in Mexico. The Aztecs built their city on an island in this lake. They are called Tenochca, a name derived from their legendary, ancestor, Tenoch. Their city was called Tenochtitlan (the stone rising in the water). The city has also been called Mexica, and its inhabitants were also known by the same name. Their language was Nahua. Even today there are people who speak Nahua in Mexico.

Barring the Incas of Peru, there has been no one in the New World who has had a empire like the Aztecs. It is the incredible story of a small wandering tribe that built and ruled an empire within the span

of only one century. But its fall was equally rapid. Its rapid rise and fall have been recorded in its oral literature and can be understood from the excavations too. The Aztec oral literature has been translated by the Spanish historians and Social scientists. These have been called as the Indian codices.

When the Spanish army entered the Mexican valley in 1519, they spotted the beautiful city on the island in a lake. That city was Tenochtitlan, the capital of the Aztecs, which had grown to symbolize their wealth and power. As the Spanish stepped into the city, they saw three wide roads. One of them led to the palace, the second led to the ornate temple and the third led to the pyramids. All these came under the Spanish conquest.

The Aztecs were basically nomadic people. It is said that they came to Mexico around the 13th century. They fought many times with a few tribes here, and also served under them. Thus, they imbibed the culture of the Toltecs, Mayas and Zapotecs. In the 14th century they took shelter on an island in a lake in Mexico and built the city of Tenochtitlan. Then they took new areas under their control and established an empire. Even today there are Indians in Mexico who are the descendants of the Aztecs.

The best of the architectural and sculptural representations are found on their buildings. Huge temples were decorated with carvings. They have recorded historical and religious events using symbols and numbers through hieroglyphic writing. They had learnt the use of the calendar from the Mayas. Their almanac gave the dates of festivals and also the list of gods influencing events periodically.

Trade connected Tenochtitlan with far-off places of the empire. Soldiers gave protection to the traders. Since there were no animals to carry loads, manual labourers were employed as beasts of burden to carry them. They used boats to sail in the canals while bringing the harvest from nearby farms. Their main crops were pulses, grains, pepper, fruit juices, tomato, tobacco and cotton. Trade was carried on by barter.

The Aztecs used their wealth and power to make their life luxurious in the capital. The king lived in a magnificent palace. The nobles and innumerable slaves were under him. There were beautiful gardens and zoos near the palace. Roads, bridges and canals led to the city. Provision was made for drinking water too.

The small islands around the island-city had been converted into agricultural land. These were called 'Chinampas'. The farmers lived in huts on the islands. The officials used to live in houses built of stone and burnt bricks. People were trained in the art of war, to use spears, bow and arrow. The prisoners captured during war would not be killed but kept in prison to be later sacrificed during rituals. The Spaniards being horrified by these Aztec rites, ruthlessly destroyed the temples to uproot their old faiths. Thus the glorious days of the Aztecs were also their last days. The Aztecs were worshippers of Nature. They tried to please God in many ways, one of them was human sacrifice. As the Aztec empire grew, they sacrificed more and more human beings to please the gods. It is believed that when the temple-pyramid of Tenochtitlan was dedicated, around 20,000 prisoners were sacrificed. The Spanish army which advanced under the leadership of Hernando Cortez in 1517 is said to have caused its cultural defeat too.

Inca

The Inca empire which flourished during the 15th and 16th centuries spread in the areas of Peru, Ecuador, Chile and Argentina. Other cultures existed before the Incas. The Inca empire continued the old cultures. Since the Incas did not know writing, not much is known about their early life. They came and settled in the Peruvian Cuzco valley around the 11th century, and gradually occupied the whole valley. Information about their lives till the 15th century is vague. Tupac was a prominent leader of the Incas. He had fought the earlier tribe of Chimus and overpowered them. Over a period of time, his descendants worked to establish an empire. But in 1532, a Spanish army of only 200 men defeated the Incas. It murdered the Inca soldiers in a gruesome manner and took over the kingdom.

The talent of the Incas can be seen more in their organizational ability than in their artistic interests. Their empire had been divided into four provinces. Chiefs looked after the provinces. Above them was the king. Officials and priests can be seen to be powerful classes of the society here. The land was divided into three parts. One part was reserved for families. The other two parts were meant for the Sun God

and the king respectively. The facility of giant granaries was made throughout the kingdom. At the time of calamities, the food grains stored in these granaries and cloth would be provided to the people. Every year inspectors would visit the villages to enumerate people in every village and also to keep an account of food and animals. Majority of these people were farmers. Some were soldiers, whereas others were artisans.

Systematic planning was possible due to good communication facilities. The state had many narrow roads and two main roads. People were appointed to stand on the roads for passing on information speedily. The greatest contribution of the Incas can be seen in their huge stone buildings. Their architecture is spread throughout their empire. Their most important buildings are in Peru. Many palaces and temples have been found here. The fort built by Tupec is also here. The palace on the island in Lake Titicaca and the Moon Temple are two famous buildings of the Incas.

The Incas had developed new ways of making pots, cloth and in working with metals. Creation of gold jewellery had progressed very well in parts of North Peru. Armours, the picture of the Sun in the temple and various gold ornaments point to the skilful craftsmanship of these people in the use of gold.

The Sun God was the most important deity of the Incas. They believed that God Veerakocha was responsible for all creation. According to them, the Sun God was the link between the people and God Veerakocha. This was the reason that there was a Sun Temple in all Inca centres. They worshipped objects of nature like the Moon, the Stars and lightning, and prayed to other natural phenomena.

Exercises

I Complete the following sentences by using suitable words in the blanks:

- 1 The epics written by Homer are the Illiad and _____.
- 2 The Greeks referred to dictators as _____.
- 3 The one who laid the foundation for the study of medicine is _____.
- 4 The first to have analysed history was _____.

- 5 'Princep' means _____.
- 6 The language of the Romans is _____.
- 7 The Stone Sculptures of the Mayan Civilization are called _____.
- 8 Texcoco is a _____ in Mexico.
- 9 The leader of the Incas was _____.
- 10 The ruling deity of the Incas was _____.

II Answer in brief the following questions:

- 1 Explain the contributions of Homer to Greek literature.
- 2 Name the Greek city-states.
- 3 Describe the features of the Roman republic.
- 4 Which are the civilizations of ancient Columbia?
- 5 Who are the 'Mayas'?
- 6 How were the Aztecs worshippers of Nature?

III Activities:

- 1 Learn about the life history of the Greek philosophers from your teacher.
- 2 Study and watch Shakespeare's drama Julius Ceasar.

CHAPTER-6

THE BIRTH OF NEW RELIGIONS

After studying this chapter you learn about:

- the origins of new religions.
- Jainism and Buddhism.
- the principles of Jainism and Buddhism.
- the spread of new religions.

By the 6th century B.C. the Vedic culture had spread upto the banks of rivers Ganga and Yamuna. Their many thoughts had an influenceing effect on the Republics that had spread all around. Society had moved towards dependence on agriculture and expansion of agriculture. Cities and Kingdoms had grown along with society and population. Man had come to understand the use of iron and used it as the blade of his plough. Due to this, agriculture could be expanded. Man chopped down forests in order to make way for cities. In this situation, the Vedic tradition began to influence people to a great extent. People engaged themselves in search for philosophical truth. It was against this background that innumerable new religions sprang up in a quest for truth. New theories of life evolved. Among these, Buddhism and Jainism earned a permanent place in India. They laid the foundation for a new life and a new history.

Jainism

Jainism is one of the very ancient religions. Traditionally, the Jains believed in the existence of 24 Tirthankaras. Rishabha was the first Tirthankara whereas Parswanatha was the 23 Tirthankara. Parswanatha was born as the son of King Aswasena in the 8th century B.C. It is believed that he renounced all luxury and indulgence, and attained immortality. He renounced society and became a hermit. He preached four principles for a peaceful life.

The four principles preached by Parswanatha, were :

1. Non-violence
2. Truth
3. Astheya (not to steal)
4. Aparigraha (not to own property)

The fifth principle of Bramhacharya was taught by Vardhamana. He was the 24th Tirtankara.

Vardhamana Mahaveera (599-527 B.C)

Vardhamana was born in Kundala grama in Vaishali, one of the republics. His father was Siddhartha, the king of the Gnatrika tribe. His mother was Trishaladevi, the princess of the Republic of Licchavi.



**Vardhamana
Mahaveera**

At the age of 30 Vardhamana set out in search of truth and renounced his family and house. He wandered for 12 years in this quest, and meditated. He punished his body by fasting. At the age of 42, he achieved enlightenment (Kaivalya). Vardhamana controlled his senses and achieved power over comfort and pain. Due to this achievement, he came to be known as 'Mahaveer' and became a 'Jina'. A Jina was one who had over come his senses and become victorious. Thus his followers came to be called Jains.

Mahaveera spent thirty years, i.e., the rest of his life preaching his knowledge to the people around the Ganga and Yamuna rivers. He travelled towards Western India preaching his thoughts. He attained nirvana in his 72nd year in Pavapuri of Bihar.

Mahaveer taught five vows and three principles of behaviour. The latter are called Triratnas.

The 5 vows are as follows :

1. Non-violence	2. Truth	3. Astheya	4. Aparigraha
5. Brahmacharya			

The triratnas are as follows :

1. Samyakgyan	2. Samyakdarshan	3. Samyakcharitra
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Jainism does not reject the existence of God completely, yet it advocates atheism. It denies the role of God in the daily affairs of people. It places God at a lower level than Jina.

The Jains believe that every animate and inanimate thing possesses a soul. They also believe that it is only through purification of the soul that one can achieve freedom from rebirth and attain nirvana. Purification is possible through meditation, fasting, punishment of the body and

thereby, destruction of the body. This process is known as sallekhana. The concept of Karma is a very important aspect of Jainism. According to this, a human being can attain salvation only through good and holy acts. To attain enlightenment, the soul had to achieve freedom from the bondage of the body.

Traditionally, we get to see two important sects among Jains called Swethambars and Digambars. Those saints and their followers who wear white clothes are called Swethambars, whereas those saints and their followers who do not wear any clothes are called Digambars. After the first Jain council, the preachings of Mahaveer were compiled in 12 volumes. These were called 12 angas by the Jains. They are in Prakrit language.

Very early, one group of Jains migrated to the South due to the famine in Bihar, and settled down at Shravanabelagola. Thus even here, Jainism spread and many works were written in Kannada, Telugu and Tamil languages. The famous Kannada poets Pampa, Ranna, Janna and Ponna were Jains.

Buddhism



Buddha

Siddartha who later became known as Gautam Buddha was born in the 6th century B.C. His father Shuddodana was the king of the republic of Shakya. Renouncing kingly luxury and familial happiness, Siddartha became a hermit. Disillusioned with the prevailing ways of life, he embarked upon a quest for truth. Attaining enlightenment, he became Buddha. After becoming Buddha, the 'Enlightened One', he first went to Sarnath near Banaras. There, in the deer park, he gave his first sermon. This has been called Dharma Chakra Pravarthana. Here he preached the Four Noble Truths and the Eightfold Path.

The Four Noble Truths declare that the whole world is full of sorrow and suffering. They also explain the root cause of sorrow. Buddha realized that desire was the root cause of sorrow. Only by the liberation of excessive desires could a peaceful life be led. Buddha preached the Eight Fold Path for eliminating desires. This is called the Middle Path.

The Eight Fold Paths are :

Right - 1. Action 2. Speech 3. Vision 4. Livelihood 5. Effort
6. Recollection 7. Resolve 8. Thought.

Followers of the New Religion

Wealthy merchants, artisans and common people were inspired by the new teachings. Buddha gave his messages in Prakrit, the language of the common man and related them to various aspects of their tradition. The atmosphere of the new cities changed the ways of life of the people. The new religions became a ray of hope in the changed circumstances. Buddhism, especially, took on a new role of transforming the lives of people.

Buddha and his followers visited Kosala, Magadha and many cities on the Gangetic plain and spread his messages there. They walked from one city to another and devoted their lives for others. In his 80th year, Buddha's glorious life of selfless service came to an end at Kushinagar. This has been called 'Mahapari nirvana'.



Sanchi Stupa

Viharas were constructed in all the areas in which Buddha wandered. People preserved his relics and bones in chaityalayas and stupas, and in memory of his accomplishments started worshipping him. This was how the first temples, idols and idol-worship began.

Buddhism spread not only in India but also in foreign countries. Chinese travellers like Fa Hien, It Sing and Hiuen Tsang have described vividly the glory of Buddhism. Buddhism had spread to Malaya, Burma, Thailand, Vietnam, Cambodia, Sri Lanka and Bamiyan too. Boulders have been cut from mountains and shaped into statues of Buddha. Even today we can see gigantic statues of Buddha in Angkor Vat of Cambodia and Bamiyan of Afghanistan. Unfortunately, the huge statues of Buddha in Bamiyan came under attack and were destroyed in recent times.

In 1956, inspired by Buddha's teachings, India's prominent social philosopher and architect of the constitution, Baba Saheb Dr. B.R.Ambedkar embraced Buddhism.

Dharma and Religion

The concept of religion is a European one. It refers to an individual's beliefs regarding man and society. It is centered around God. When it is not centered around life in this world, it becomes philosophy. Each religion has sacred books of its own. These books reveal the thoughts of the person responsible for the birth of the religion. As religions grew, different sects developed among them. In the Indian context, only Islam and Christianity can be called religions. The nature of the traditions of Buddhists and Jains is different from that of a religion. Here a distinction can be made between theists and atheists. Traditions that approve vedic authority or faith in the existence of god are considered theistic traditions. Traditions denying the vedas or having no faith in the existence of god are considered atheist. The concept of Dharma is related to a way of life.

After Buddha's death, his followers collected his teachings and tradition in the form of Tripitakas. These are Vinaya, Dhamma and Abhidhamma pitakas. Over a period of time, disagreements developed in the teachings and different branches of Buddhism sprang up. Thus Hinayana, Mahayana, Vajrayana and their sutras came into being. Today we see many organizations across the globe adopting different ways of realizing Buddha.

Foreign Invasions

During this period, there sprang up city-states in Greece. Ancient Persia had grown into a powerful empire. These two areas engaged in continual conflicts. The Akhimenians were one group who ruled Persia. In 6th century B.C. King Darius of this dynasty established a strong empire. His kingdom extended up to the Indian border during his time. In 4th century B.C. the Macedonian king Alexander won over the Greek city-states and captured Persia. Thus even the part of the Persian kingdom which had spread up to the Indian border, came under the control of Alexander. After overpowering Persia, Alexander entered India through the passes in Kandahar and Hindu Kush. He advanced

till Ravi and Beas rivers, and unable to proceed further, he crossed the Indian border through river Jhelum, and on his way back home, he died at Babylonia.

The battle between Alexander and Paurava:

When Alexander accepted the invitation of Ambhi, the king of Taxila, and came to India, it was Paurava that he had to confront. Paurava was also called Porus. The two armies faced each other on the banks of the river Jhelum which was flooded and wild at that time. Alexander's army attacked Paurava who had never expected anyone to cross the swollen river, and won. Alexander asked the captured Paurava how he desired to be treated. Paurava replied with pride and courage, "As one king deserves to be treated by another". Paurava's brave adventures have been immortalized in Greek writings. Alexander's attack led to the consolidation of small and big republics and the establishment of the Mauryan dynasty. The arrival of the Greeks influenced North Indian art and science. Proof of this influence can be found in the famous art form known as Gandhara art which existed at that time.

Exercises

I Complete the following sentences by using suitable words in the blanks:

- 1 The first Jain Tirthankara was _____.
- 2 Vardhamana was born at _____.
- 3 Mahaveera attained _____ in his 42nd year.
- 4 Mahaveera attained Nirvana at _____ in his 72nd year.
- 5 The original name of Gautama Buddha was _____.
- 6 Buddha delivered his first sermon at _____.
- 7 The first sermon of Buddha is called _____.

II Answer in brief the following questions:

- 1 Write in detail about Mahaveera's life.
- 2 What are the triratnas?
- 3 Name the sects among the Jains.
- 4 What is the middle path?
- 5 Who were the people influenced by the new religion?
- 6 Write a note on the Tripitikas.

III Activities:

1. Collect information about the life of Mahaveera.
2. Collect pictures relating to the life of Gautama Buddha.
3. Learn the meanings of words like dharma, sect, theism and atheism.

I do not want my house to be walled in on all sides and my windows to be stuffed. I want the cultures of all the lands to be blown about my house as freely as possible. But I refuse to be blown off my feet by any.

- Mohandas Gandhi

CHAPTER-7

MAURYAS AND KUSHANS

After studying this chapter you learn :

- that first ever empire of India was Mauryan empire.
- about the empire, Ashoka's achievements, administrations and contributions to art and architecture.
- about the history of Kushan's, administration and contributions of Kanishka.
- Locating (marking) the region of Ashoka's empire on the India map.

The Mauryan Empire

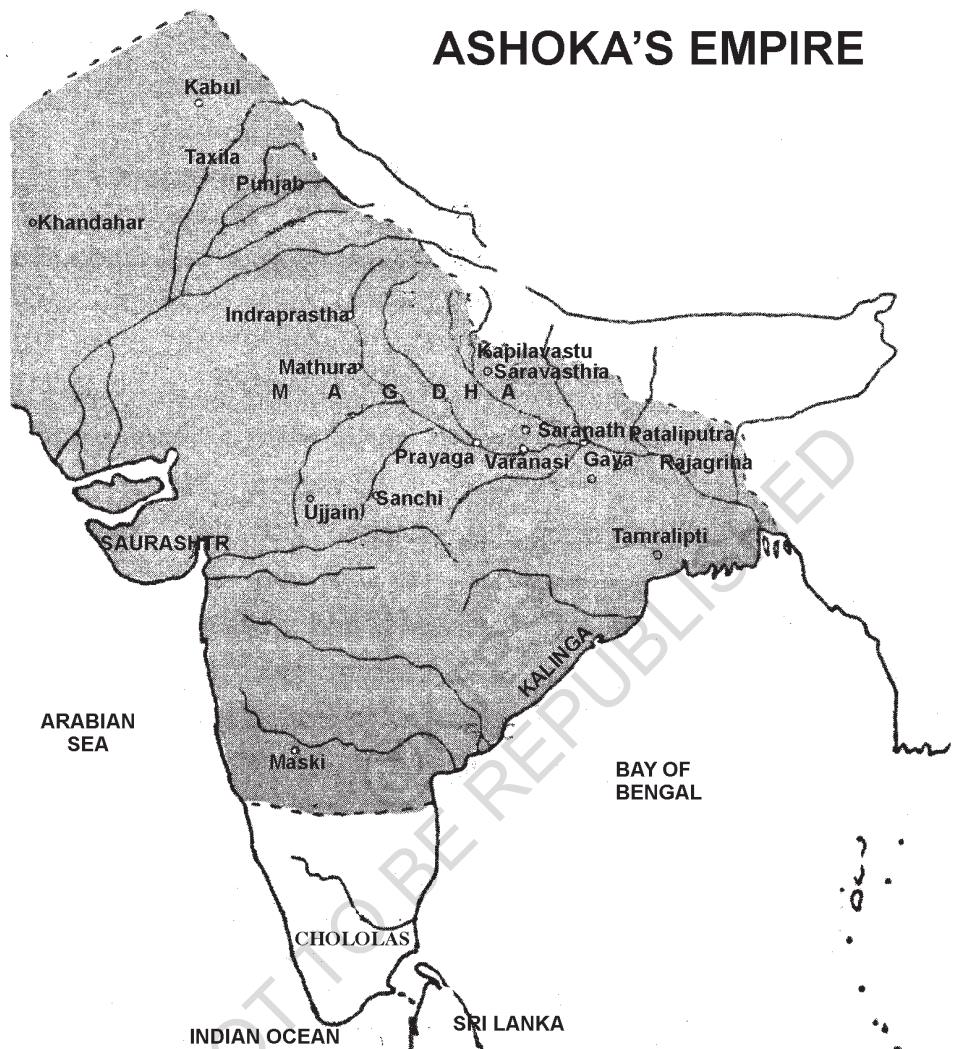
The Mauryan empire was the first Indian empire. They ruled the kingdom from Magadha. Chandragupta Maurya, Bindusara and Ashoka are the prominent kings of this dynasty. The dynasty was established by Chandragupta Maurya. The Greek ambassador Megasthenes recorded the fame of Chandragupta in 'Indica' and immortalized him. The contents of 'Indica' are not known to us since this work has been lost. But certain descriptive experts have been found in the works of some Greek writers. Chanakya was Chandragupta's minister. He became widely known as Kautilya. His ideas are described in the work 'Arthashastra'.

Arthashastra

In 1902, R. Shama Sastry a renowned sanskrit scholar, found, in the Oriental Library of Mysore, the manuscript of Arthashastra written by Kautilya. The Arthashastra is not merely economics as understood by the western world. Arthashastra contains topics like principles of administration of a kingdom, the responsibilities of a king and his ministers, foreign policy, financial management, etc. Stress is laid on the spy network and military system. Even after thousands of years, Kautilya's Arthashastra has been attracting scholars by its uniqueness.

Ashoka is a famous king of this dynasty. Five important city centres can be identified during this period. They were the capital of the Mauryas, Pataliputra, Taxila, Ujjain, Kalinga and Suvarnagiri. These were major link routes too. Taxila was the gateway to north-west India. Ujjain was the route to trade from north to south. Kalinga was the gateway to the sea through the river Ganges. Suvarnagiri was in the Deccan region, i.e., the modern-day Karnataka. All these areas were trade routes and were in contact with one another.

ASHOKA'S EMPIRE



The Battle of Kalinga

Eight years after his coronation, Ashoka conquered Kalinga. 150000 soldiers were captured in this battle. 1,00,000 people died during the battle. Seeing death and suffering the battle had caused, Emperor Ashoka was moved. He was saddened by the realisation that innumerable, innocent people who had been in perfect harmony with their fellow-human beings and were leading simple, virtuous lives, had either died or been wounded and separated from their loved ones. This was the reason that after conquering Kalinga, Ashoka experienced deep regret and, inspired by 'Dhamma', advocated peace.

Ashoka carried on the administration of his vast kingdom from different centres. All centres proclaimed the aspirations of the king. His aspirations were expressed through edicts. These edicts, which can be seen on rocks and stone pillars, have been the first ever inscriptions available to us. Ashoka was transformed after viewing the huge loss of life during the Kalinga war. Compassion as preached by Buddha influenced Ashoka. He spread the teachings of Buddha throughout the country. He appointed Dharma Mahamatras for this purpose. His views on Dharma are expressed in his edicts. These are well-known as Ashoka's Dharma.

Many of the edicts issued by Ashoka are in Prakrit. They are in Brahmi script. Ashoka's rock edicts have been found at Brahmagiri, in Karnataka.

The symbol found in the Sarnath pillar of Ashoka has been adopted by the Indian government as its national emblem.



The Dharmachakra engraved on the pedestal

We see vast developments in trade and agriculture during this time. The government had adopted various measures to improve agriculture. Special tax concessions were given towards this end. There were many officials to carry on the administration of the vast empire. A permanent army was also found necessary. To carry out all these activities, taxes were needed. Land tax was the main source of income for the king and various officials served in collecting taxes. Spies kept the king informed. They had established control over trade and commerce by regulating sea and land routes. Different taxes were levied on these.

The Kushans

After the Greeks, it has been the Kushans who have influenced Indian history and culture. They gave special impetus to the spread of

Buddhism. The Mahayana sect received greater encouragement under their patronage. Gandhara sculpture flourished during their time.

An important dynasty after the Mauryas is that of the Kushans. They were basically from a nomadic tribe which had migrated to India from Central Asia. They were the progeny of Yuchi. The Sakas and the Parthians were the other foreign communities that had settled in the north-western part of India. The Kushans defeated the Sakas and the Parthians, and settled in the Gandhara region.

The founder of this dynasty was Kujalakadphesus. Vimakadphesus and Kanishka are the noteworthy kings of this dynasty. The Yuchs were basically tribals. The Yuchi factions became united under the leadership of Kujalakadphesus. He crossed the Hindu Kush range and settled in Kabul and Kashmir. During the time of Vimakadphesus, gold coins were brought out. From then onwards, the Kushans minted mainly gold and copper coins.

Kanishka came after Vimakadphesus. During his reign, the Kushan dynasty prospered greatly. He established his rule in 78 A.D. and heralded a new era. This era is called the 'Saka' era.

Kanishka's rule had spread up to Sanchi in the south and Banaras in the east. His kingdom, which included Central Asia too, was a vast empire. Purushapura was his capital. Mathura was another significant town of his time.

Due to the patronage given by Kanishka, Buddhism could prosper much more than before. We get to see many Buddhist scholars like Aswagosha, Vasumitra, Sangaraksha and others at this time. The fourth Buddhist conference was held at Kashmir under the leadership of Kanishka. Like Ashoka, even Kanishka sent missions to Central Asia and China to spread Buddhism. During his reign, art and architecture got encouragement.



Gandhara style Buddha

Exercises

I Complete the following sentences by using suitable words in the blanks:

- 1 Chanakya came to be known as _____.
- 2 The capital of the Mauryas was _____.
- 3 The founder of the Kushan dynasty was _____.
- 4 The new era of Kanishka's reign is called the _____.

II Answer to the following questions in brief :

- 1 Name the important cities during Ashoka's period.
- 2 Describe Ashoka's administration.
- 3 Which dynasty did the Kushans belong to?
- 4 What was the extent of Kanishka's empire ?

III Activities:

- 1 Learn about the Gandhara art.
- 2 Collect information from your teacher about the Buddhist Conference which took place during Kanishka's rule.

The outward freedom that we shall attain will only be in exact proportion to the inward freedom to which we may have grown at a given moment. If this is a correct view of freedom our chief energy must be concentrated on achieving reform from within.

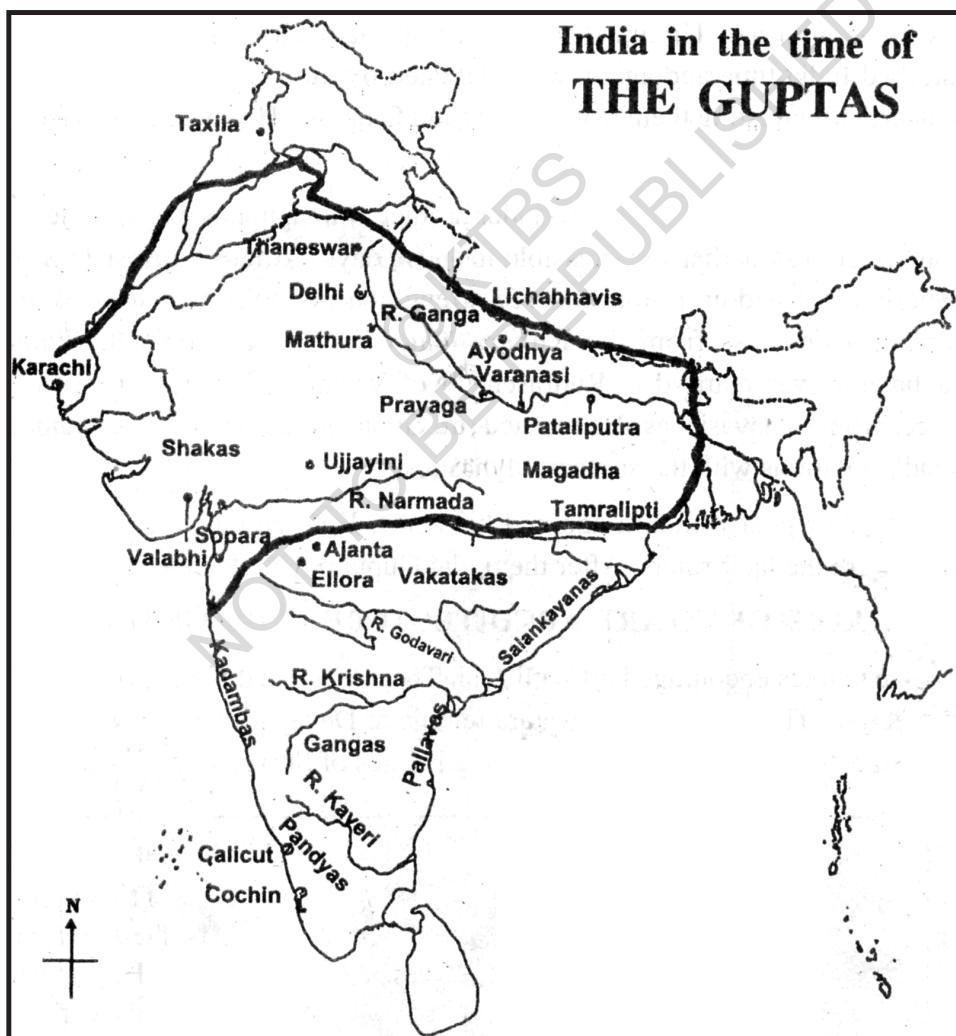
- Mohandas Gandhi

CHAPTER-8

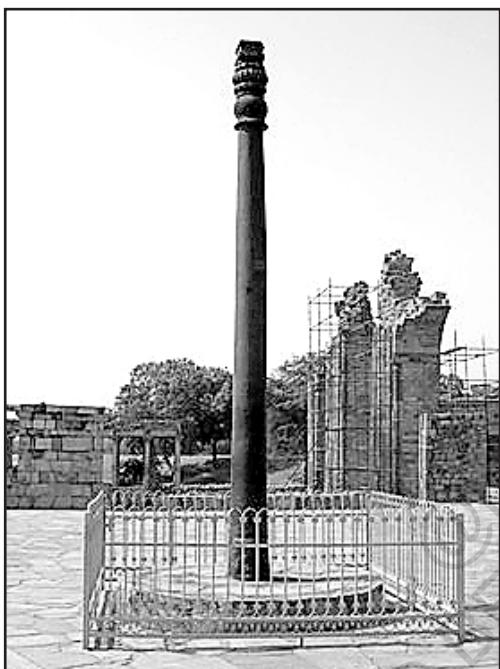
THE GUPTAS AND VARDHANAS

After studying this chapter you learn:

- about the contribution of Gupta dynasty to administration.
- about their contribution to literature and science.
- about the famous rulers, expansion and growth of Gupta empire.
- about the growth of Vardhana's and their contributions to literature and education.
- to know the extent of Gupta empire in the map of India.



After centuries of political instability, the Gupta Empire rose in the 4th century A.D. Sanskrit language and its vast literature bear a mirror to this age. The guptas probably came over from Magadha. Chandragupta I married a Licchavi princess and strengthened his kingdom. It is believed that the Gupta era began with his reign in 320 A.D. He was called the Maharajadhiraja.



We see his son Samudragupta after him. His achievements have been commemorated in the Allahabad prashati written by Harisena. This is in Sanskrit language and has been inscribed on Ashoka's pillar. Most part of India was under the rule of the Guptas during the time of Samudragupta. His Aswamedhayaga brings to mind the Vedic rituals and traditions. Samudragupta was not just a conqueror, but a great poet and a lover of music too. His passion for music can be seen in the gold coins which depict him playing on the veena.

Mehrauli Iron Pillar

The Iron Pillar at Mehrauli in Delhi near Qutb Minar is important. It is 23 feet and eight inches in height and weighs 6,000 kg. It is one of the finest examples of the technical skill of the time. It has not become rusty till now. That shows in those days Indians had a sound Iron technology.

Meghadoota

This is a poetic creation of Kalidasa, and is one among his very famous work. Yaksha is exiled by King Kuber for having neglected his duties. In this situation, the yaksha stops a passing cloud and persuades it to carry a message of love to his wife who lives near the Kailash mountain. He describes the beautiful scenery on the route to his wife's place. Even today this poem is famous all over the world. It has been translated into all the Indian languages and major languages of the world. People have been enjoying the dramatization of Meghadoota till today.

Chandragupta II expanded the kingdom of Samudragupta and brought stability. He defeated the Sakas and made Western India a part of the Gupta Empire. He developed relationships with many Indian royal families through marriage and became very influential. He earned the title of Vikramaditya. His reign is memorable more for the encouragement given to literature and art, rather than for its battles. The famous Sanskrit poet and dramatist, Kalidasa, belonged to this age. Meghadoota, Raghuvamsha, Kumarasambhava and Ritu Samhara are his poems. Abhijnana Shakuntala is one of his noteworthy dramas. Sudraka's Mricchakatika and Vishakadatta's Mudrarakshasa are the other literary works of this period.

Abhijnana Shakuntala



This is considered the best drama of Kalidasa. The story of Shakuntala is in the Mahabharata. In the story, King Dushyanta while on his hunt in the forest, happens to come to Sage Kanva's ashram. There he sees Shakuntala, falls in love with her and both get married in Gandharva style. All this takes place in the absence of Sage Kanva. After some time, Dushyanta leaves Shakuntala in the ashram and returns to his capital. During this period of separation, Sage Durvasa arrives at Kanva's ashram. Seeing Shakuntala lost in the thoughts of Dushyanta and finding none to attend him is enraged. Sage Durvasa loses his temper and curses her saying, "Let the one in whose memory you sit, forget you". When he realizes his own harshness, Sage Durvasa suggests a way to be free from the curse. He says that an object given to her would ultimately bring back his memories of her. The object was a ring that Dushyanta had given Shakuntala. As Sage Durvasa had said, Dushyanta forgets Shakuntala. After a period of time the disciples of sage Kanva take the carrying Shakuntala to the court of Dushyanta to unite them. On the way, Shakuntala loses the ring which would have brought back recollection in Dushyanta. Thus Dushyanta is unable to recognize her. Shakuntala leaves the palace in humiliation. After a few days, the ring is found in the stomach of a fish, and on seeing it, Dushyanta recalls everything. He is filled with remorse. Some time later, while he is returning from a journey, he pays a visit to Sage Maricha's ashram. There he sees a small boy playing with lion cubs, and when he enquires about his background, he comes to know that the boy is his own son, Sarvadamana. In this manner, Dushyanta is united with his wife, Shakuntala, and son. Abhijnana Shakuntala is one of the greatest dramas in the world. It has earned great acclaim all over the world.

The Gupta Empire was subjected to continual attacks of the Huns and, thus, soon declined. The Guptas did not have a fully equipped large army. The kings' vassals would fulfil the requirements during times of war. Hence, the vassals had become very powerful. The bureaucracy consisted of Kumar Amatyas. They held various positions. The administration was decentralized. The priests received many grants. They would be granted many villages. Many temples saw development due to this. These areas not only enjoyed financial and administrative concessions but also became independent in all matters. However, over a period of time, the inhabitants, farmers, artisans began to be controlled by the landlords. In this way, society grew more and more complex.

During this period, the trade that the Guptas had with the Westerners collapsed. Consequently, their economic system suffered. The restrictions imposed on their empire obstructed their internal trade too. Trade was limited to villages. The collapse of trade led to the decline of the city centres. Pataliputra got reduced to the size of a village.

This period witnessed great heights in the creation of various devotional and religious texts like the Puranas and the Dharmashastras. Varahamihira, Bhaskara, Aryabhata, Charaka and Sushruta were the great scientists of this time. Varahamihira, Bhaskara and Aryabhata made significant contributions to the study of astrology, astronomy and mathematics. Charaka wrote Charaka Samhita. Sushruta wrote Sushruta Samhita which dealt with surgery.

Scientists of the Gupta Period :

1. Dhanwantari: *He was a famous scholar in the field of medicine. He was a specialist in Ayurveda. He is the father of Indian Medicine. His chief contribution to the medical field has been the Ayurvedic dictionary.*

2. Charaka: *He was a medical scientist. His major contribution to the field of medicine has been the Charaka Samhita.*

3. Sushruta: *He was a surgeon. He was the first Indian to explain the process of surgery. He has recorded that in those days, there used to be a separate wing to treat soldiers. Like modern time surgery sushruta was a wellknown surgeon of ester years and contributed significantly to the field of surgery.*

4. Aryabhata: *He was a famous astronomer and mathematician. He is the prominent scientist who came after Varahamihira. His contribution to Astronomy and Mathematics has been highly significant.*

This is the reason that the Aryabhata award is being presented by the Indian Government to great scientists. The first Indian satellite have been named after Aryabhata. He is believed to have invented the zero. He was the first Indian to master algebra. He reiterated the fact that solar and lunar eclipses happen not due to Rahu but due to the rotation of earth on its own axis and revolution of the earth in its orbit around the sun.

5. Varahamihira: *He was a famous astronomer. He wrote a book on astronomy named Panchasiddhantika, which is considered the Bible of Astronomy. In addition to this, he wrote Bruhat Samhita, Bruhat Jataka and Laghu Jataka. He was a scholar in many fields like astronomy, astrology, geography, metereology, etc.*

THE VARDHANS

The Gupta Empire which had flourished for two centuries, disintegrated around 6th century A.D. Many small kingdoms sprang up at this time. The kingdom of the Vardhanas was one of them. They ruled from Thaneswar in 6th century. Some copper inscriptions, Bana's Harshacharita and the Chinese traveller, Hiuen Tsang's writings throw light upon this period.

Pushyabhuti is the founder of this dynasty. Prabhakaravardhana and Harshavardhana are the prominent kings of the dynasty. After the death of his father, Prabhakaravardhana, and his brother, Rajyavardhana, Harsha became the king of Thaneswar.

His sister Rajyashree was married to the king of Kanauj. When the king of Bengal Sashanka killed the king of Kanauj, Harsha captured Kanauj, and attacked the king of Bengal. Bengal and Magadha came under his rule. But he could not advance beyond the Narmada river in the south. The Kannada king of the Chalukyas, Pulakeshi II, halted his progress, and forced him to go back. This achievement of Pulakeshi II has been immortalized in the panegyric (prashasti) written by the court poet, Ravikirti. He has expressed that the exultation of the king Harsha's joy had dried up on account of this defeat.

The king's rule was assisted by the council of ministers. The bureaucracy consisted of the Mahasandhivigraha (the negotiator), Mahabaladhikruta (military general), Bhogapati (tax official) and Doota. The kingdom had been divided into provinces. Land tax was the major source of income for the kingdom. Feudatory chiefs paid tribute to the king. The king gave them land, grants and in return, got the help of their armies. When the king became weak, the feudatory chiefs became independent.

Land grants were given to other communities and religious people as well. Harsha gave prominence to Buddhism. We get details of the popularity of Buddhism from Hiuen Tsang's writing. The Buddhist Nalanda University was full of activity during this period. It enjoyed royal patronage.

Nalanda



Buddha's followers believe that 'Nalanda' was the name of Buddha in his previous birth. This is famous as an ancient university. Buddha had visited Nalanda. Mention has been made of the 25 metre tall bronze image of Buddha that Harshavardhana gifted to Nalanda. Kumaragupta had made contributions to a fine arts school here. Nagarjuna the Chief exponent of middle path, Dinnaga and Dharmapala were the other famous scholars who taught here. The Chinese traveller, Hiuen Tsang, visited this place and stayed for some time. He has given a detailed description of this place. There were stupas, chaityas, viharas, rest houses, steps here and there to sit and rest awhile, meditation rooms, lecture rooms and many other structures reveal the glory of this place. The Gupta kings and Harshavardhana have been the famous patrons of this place. An accidental fire destroyed many texts at Nalanda.

Exercises

I Complete the following sentences by using suitable words in the blanks.

- 1 The Guptas began their reign from the place _____.
- 2 Chandragupta I was called _____.
- 3 One of the great drama of Kalidasa is _____.
- 4 Vishakadatta's literary work is _____.
- 5 The literary work written by Sudraka is _____.
- 6 The founder of Vardhana dynasty was _____.

II Answer in brief the following questions:

- 1 Write about Chandragupta II.
- 2 What were the reasons for the downfall of the Gupta Empire?
- 3 Name the great scientists of the Gupta Age.
- 4 How was the administration during the Vardhana rule?

III Activities:

- 1 Gather details about all the works of Kalidasa.
- 2 Collect information and pictures of the scientists of the Gupta period.

CHAPTER – 9

SOUTH INDIA

(From 3rd century B.C. to 13th century A.D.)

After studying this chapter you learn:

- about the growth of Shatavahanas in south India, their achievements, administration, art and architecture.
- the achievements of Shatakarni.
- that Kadambas were the first to establish an empire in Karnataka.
- about the establishment of Ganga dynasty, their contributions to art, architecture and literature.
- Locating the areas of Shatavahana's, Kadambas and Gangas.

The Vindhya mountains separate North and South India. The area between the Vindhya mountains and Kanyakumari in the south is called South India or the Deccan region. The Shatavahanas, Kadambas, Gangas, Chalukyas, Rashtrakutas and Pallavas have been the important dynasties of this region.

The Shatavahanas (230 B.C. to 220 A.D.)

The Shathavahanas were the first to have established a dynasty in the Deccan. They had settled themselves in the land between the Godavari and Krishna rivers. They were the vassals of Chandragupta Maurya and were paying tributes to him. In 220 BC Simuka became independent and made Srikakulam, his capital.

Gautami Puthra Shatakarni : He was a prominent king of this dynasty. He had done away with the bitter enemies of the kingdom , the sakas, beyond the borders of India. Shalivahana Saka is supposed to have been inaugurated by him.

He expanded his kingdom to include not only Konkan, Birar, Saurashtra and Malawa, but also many new areas. He had titles such as 'Trisamudratoyapitavahana' and 'Shatavahana Kulayashapratishtapanakara'. Yajnashri Shatakarni was the last king of this dynasty. During his time, on account of continual attacks by the Shakas, the empire stood devastated.

During the Shatavahana rule, the king was supreme. The kingdom had been divided into provinces called Janapada for purpose of administration and officers had been appointed to look after them. The cities and villages were looked after by self-governing institutions.

There was no discrimination on the basis of varna in the society. Even women held high offices and had status in society. There were people of different occupations like farmers, merchants, goldsmiths, fishermen, carpenters, weavers, medicine man etc. There were occupational associations. Later these associations emerged as commercial and trade organisations. There was encouragement for even foreign trade, and Nasik, Kalyan, Broach and Bhatkal were trade centres.

The Shatavahanas who followed the Vedic tradition, encouraged other religions like Buddhism and Jainism and believed in harmony.

They promoted art, literature and education. Literature was created in Prakrit, the language of both scholars and common people. *Gathasaptashati* written by Hala is an example of this.

The Ajanta and the Amaravati paintings were created during the period of the Shatavahanas. Temples, viharas and chaityalayas were also constructed. A chaityagraha was built in Karle by the Banavasi merchant Bhootapala.

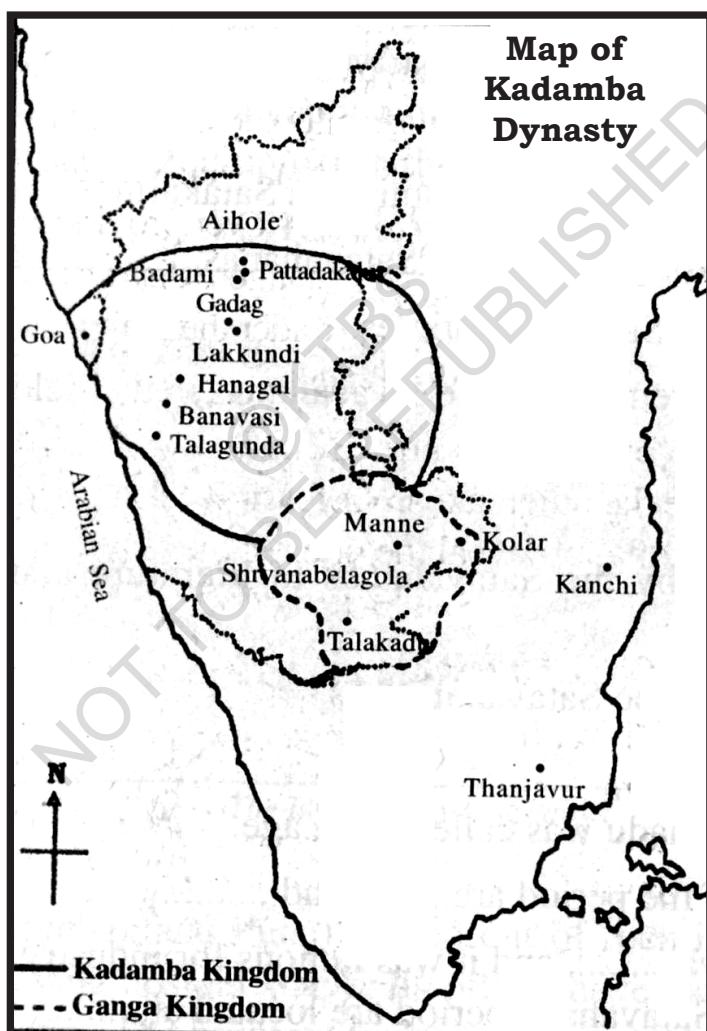
During the period of the Shatavahanas, the Kannada land was prosperous and had adventurous and able administrators. They had enriched Indian culture by their contributions.



Chaityalaya at Karle

The Kadambas (325 A.D. to 540 A.D.)

This is the first dynasty to be established in Karnataka. Their capital was Banavasi which is in today's North canara district. Mayurasharma was the founder and a great king of this dynasty. When Mayura sharma was insulted by the Pallava king, Shivaskanda Varma, he adopted the kshatriya way of life and became Mayuravarma. He defeated the Pallavas in a war and established the Kadamba empire. He is the pride of all Kannadigas.



According to the Chandravalli inscription at Chitradurga, Mayuravarma is said to have increased the height of the wall of the chandrvathi lake.

The Kadambas made special contributions to Karnataka and Indian culture. There was political unity for around three hundred years under the Kadamba rule. Royal priests, ministers and military generals played a significant role in administration. For administrative ease, provincial officers had been appointed to look after the provinces.

Land revenue was the main source of income in the kingdom. The occupations such as carpentry, goldsmithy, blacksmithy, weaving, oil-extraction, pottery were the main ones in the society. There was greater encouragement for agriculture and trade. Most of the people followed varnashrama. Greater importance was given to patriarchy and undivided family.

Though they were the followers of the Vedic culture, the Kadambas encouraged Jainism and Buddhism. They gave charity to Jain temples and scholars at Hangal, Puligere and other places, and promoted the spread of Jain culture.



Madhukeshwara Temple, Banavasi

Buddhism was also flourishing in the Kadamba kingdom. It inculded Ajanta and Banavasi, two of the important centers of Buddism. The temples were centers of festivals and celebrations. Both Prakrit and Sanskrit received encouragement. First Prakrit and later Sanskrit

became the court language. Kannada was the language of the people. The ancient Halmidi inscription shows the characteristics of the Kannada language which was in use in the 5th century. This has been the first inscription available in Kannada.

The Malavalli inscription is in Prakrit language. The Talagunda inscription is the first Sanskrit inscription to be found in Karnataka.

The Kadambas laid the foundation for architecture in Karnataka. They built many temples and basadis in Banavasi. During this period, educational centers like agraharas, brahmapuris and ghatikas were established. The main agraharas of that time were found in Talagunda and Balligave. The agraharas were like residential schools.

The Gangas (350 A.D. to 1004 A.D.)

The rise and fall of the dynasty of Ganga rulers constitute an important chapter in early history of Karnataka. The founders of the Ganga dynasty claimed their descent from the Ikshvaku dynasty. They ruled from Kuvalala, Talakadu and Manyapura (today's Manne in Nelamangala, Bangalore Rural district).

The Gangawadi kingdom which began with the rule of Dadiga (also known as Kongunivarma), was ruled by 27 kings. Durvinita was a famous king of this dynasty. He was a brave warrior and scholar. He ruled for a long period and gained control of Punnata in order to strengthen his Kingdom. The Nallala copper inscription reveal that he constructed many lakes for the purposes of irrigation. He was a lover of Literature and wrote creative works in Sanskrit and Kannada. He even translated the Prakrit work 'Vaddakatha' of Gunadya in to Sanskrit.

The Contributions of the Gangas

The king had a council of ministers to help him. The ministers supervised different branches of administration. The administration in the villages was very systematic. The village committee looked after land revenue, justice, sanitation and defence. Agriculture was the main occupation. There were other occupations like weaving and black smithy. They had trade relations with other countries.

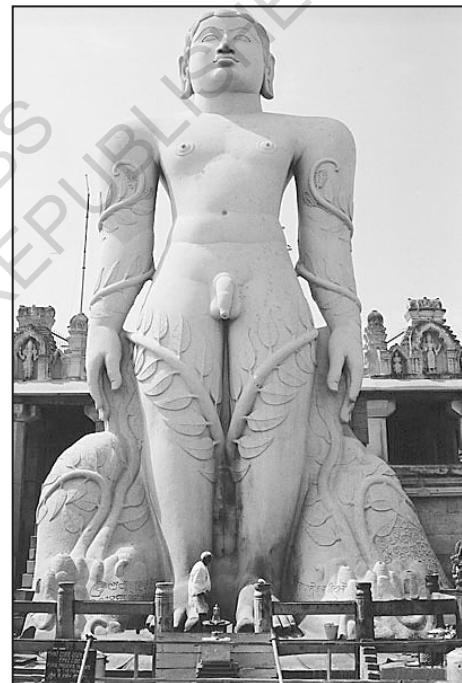
Though the society at the time of the Gangas had been divided into different sects and castes, they were all interdependent. The practice of a patriarchal undivided family was common. Social values like honesty, loyalty, bravery and patience were prominent among the people.

Chaityalayas, temples, mathas and agraharas were centers of education. There were Brahmapuris and Ghatikas for higher education. Talakadu, Shravanabelagola, Bankapura and Peruru have been named as centers of learning.

Since the Gangas were Jains, Jainism flourished here. Poojyapada, Vajranandi, Ajitsena and others popularized this religion. Further, they installed a 58 foot monolithic idol of Gommateshwara at Shravanabelagola and made it a famous centre. You must have heard about the Maha Mastakabhisheka of Gommateshwara which takes place once in every 12 years even to this day.

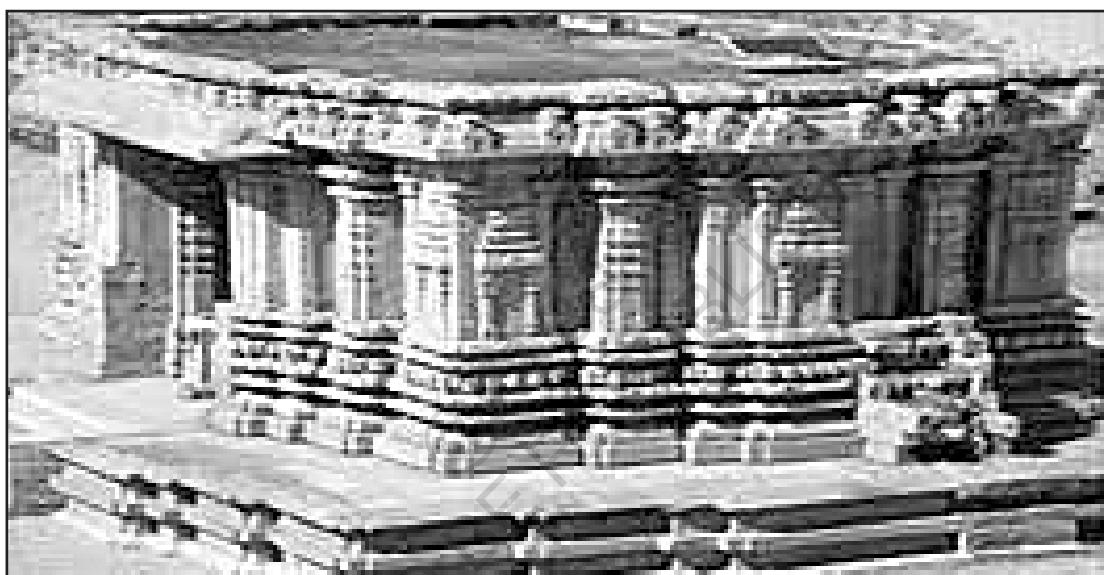
Bahubali- Gommateshwara

Gommateshwara (Bahubali) of Sravanabelagola is a symbol of life of renunciation. The Statue of Gommateshwara was installed by Chavundaraya, the minister of Rachamalla IV. Among 100 brothers, Bharata was the eldest, Bahubali the youngest. After Bharata was coronated as the king, he finds a Chakraratna (a special wheel), won all the kingdoms and became an emperor. Even before that, all his brothers accepted his sovereignty. But when Bahubali did not accept it, both of them got ready to engage in a battle. Bharata lost in drushti yuddha, jala yuddha and malla yuddha. At the end of malla yuddha, Bahubali lifted Bharata and spinning him in the air like a wheel, was about to throw him away, suddenly he lost all interest in everything around him, and put his brother down. He bowed to his brother and went away to meditate for nirvana, standing all the time. As he did not achieve salvation, he realises that as long as he stood in his brother's kingdom and meditated, he would not achieve nirvana. Later Bharata came and said that the whole kingdom was Bahubali's, and that he was ruling it on Bahubali's behalf. Then Bahubali achieved nirvana.



Gommateshwara

The Ganga kings encouraged art and architecture. They built beautiful temples and basadis. The Kapileshwara temple at Manne, Pataleshwara and Maruleshwara temples at Talakad, Kolaramma temple at Kolar, Nagareshwara temple at Begur and the statue of Gomateshwara at Shravanabelagola are examples of their architecture. The significant contribution of the Gangas has been the tall pillars called Manastambhas and Brahmamanastambas.



Pathaleshwara Temple in Talakadu

The Ganga kings were lovers of literature and due to their encouragement to Sanskrit, Prakrit and Kannada languages, many works were written in these languages. Madhava II wrote commentary on Dattaka Sutra.

Durvinita wrote the Sanskrit work 'Shabdavatara', and translated Gunadhya's 'Vaddakathe' into Sanskrit. Sree Purusha wrote 'Gajashastra' and Shivamadhava wrote 'Gajashtaka', a Kannada work. Poet Hemasena wrote 'Raghava Pandaviya', Vadibasimha wrote 'Gadya Chintamani' and 'Shatra Chudamani', whereas Nemichandra wrote 'Dravyasara Samgraha' and Chavundaraya wrote 'Chavunda Purana', and became famous.

Exercises

I Complete the following sentences.

- 1 Simukha made _____ his capital.
- 2 The literary work written by Hala is _____.
- 3 The first inscription in Kannada is _____.
- 4 Banavasi, the capital of the Kadambas, is in today's _____ district.
- 5 The prominent king among the Gangas was _____.
- 6 The literary work written by Chavundaraya is _____.

II Answer in brief.

- 1 Who was the last king of the Shatavahanas? How did their dynasty become weak?
- 2 Write about the art of the Shatavahanas.
- 3 What were the values which influenced the Ganga society?
- 4 Name four literary works of the period of the Gangas.

III Activities.

- 1 Discuss with your teacher the way to read inscriptions.
- 2 Visit a historical temple nearby and collect its details. Share the information with your classmates.

IV Projects.

- 1 Cultivate the habit of reading inscriptions.
- 2 Study one inscription and do a project on it.
- 3 Visit the capitals of the Gangas and collect information on them.

CHAPTER – 10

THE CHALUKYAS OF BADAMI AND THE PALLAVAS OF KANCHI

After studying this chapter you learn about:

- the beginings of Chalukyas of Badami, the expansion of the empire under its foremost king pulakeshi II.
- religious, social, military and judicial system.
- the extent of empire under the Chalukyas of Badami with the help of a map.
- the contributions of Pallavas of Kanchi to the field of literature, religious, art, architecture and the field of education.

The Chalukyas of Badami (540 A.D. – 753 A.D.)

Many powerful kings ruled Karnataka in the 6th century A.D. They were the Chalukyas of Badami. They established their supremacy in Karnataka for over two centuries continuously, and ruled with immense glory. The Chalukya dynasty occupies an important position in the history of South India and is one of the powerful dynasties of India.

The rule of the Chalukyas began in the 6th century and ended in the middle part of the 8th century. Raja Jayasimha is the founder of this dynasty. The most powerful and noteworthy emperor of this dynasty is Pulakeshi II. Overpowering the Gangas, Kadambas and Alupas, he extended his empire. The Pallavas were at the peak of glory in South Deccan. Since Mahendravarma did not accept the sovereignty of Pulakeshi, Pulakeshi defeated him. When Harshavardhana, who was ruling in North India, he advanced upto the banks of river Narmada, Pulakeshi stopped him and earned the titles of 'Dakshinapatheshwara' and 'Lord of the Peninsula' for his daring act.

Pulakeshi II could not rule the whole of his kingdom from one centre. He appointed his younger brother, Kubja Vishnuvardhana, as the provincial head of Vengi and Jayasimha as the head of Gujarat province.

Later on, Chalukyas ruled the kingdom for around five centuries under the name of 'Chalukyas of Vengi'.

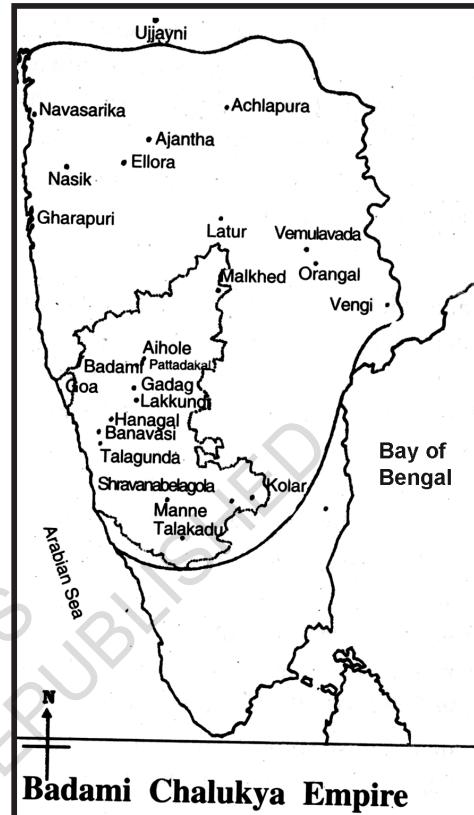
Hiuen Tsang visited the Chalukya capital. He has given a detailed description of Pulakeshi II and the Chalukyan kingdom. He has said that the king was just and kind. The army was disciplined and the soldiers were courageous warriors who were not afraid of death. The subjects were lovers of truth, contented, self-respecting, prosperous and loyal to the king. They respected the king very much, and the king loved his subjects.

Pulakeshi II was an optimistic emperor. He had friendly relations with foreign kings too. Arab historians report that he had diplomatic relations with the Persian king, Khusrui II.

After some years, the Pallava king, Narasimhavarma I took revenge on the Chalukyas for the defeat of his father Mahendravarma. He occupied the Chalukyan kingdom and captured Vatapi. During the time of the last Chalukya king, Kirtivarma, the Rashtrakutas captured this kingdom.

The Contributions of the Chalukyas

The Chalukyas developed the Kannada land, language and culture, and protected its religion, literature, art and architecture. They were the ones who gave the name 'Karnataka' to this land. The reign of the Badami Chalukyas is a great and glorious period in the history of Karnataka. This age is noteworthy not only for its military exploits but also for its art and literature.



They ruled for around 200 years. The king was actively involved in administration. The kingdom was divided into districts called vishaya and the vishayadhipati used to look after it. The village was the smallest unit of the administration. The village leaders looked after the village accounts.

The Chalukyas encouraged all traditions and sects like that of the Shaivas, Vaishnavas and the Jains. They supported the construction of Jain temples and Buddhist viharas too.

The Chalukyas of Badami patronized literature. Kannada and Sanskrit developed very well. Kannada was their state language. During this period, the tripadi form of poetry came into existence. Though there are no literary works produced in Kannada at this time, there are many inscriptions written in Kannada. One of the poem in the inscription of Kappe Arabhatta of Badami is in tripadi form.

Poem in the inscription of Kappe Arabhatta

ନାରୀରାଜୀବିଷ୍ଣୁରୁଷରୁଷ୍ଣିରୁଷ୍ଣିରୁଷ୍ଣି ।
ଦୀର୍ଘ ରୂପିରାଜୀବିଷ୍ଣୁରୁଷରୁଷ୍ଣିରୁଷ୍ଣିରୁଷ୍ଣି ।
ଦୂରନ୍ତେତୁ ଶ୍ରୀକୃତି ।

ಸಾಧುಗೆ ಸಾಧು
 ಮಾಧುಯುಂಗೆ ಮಾಧುಯುಂ
 ಬಾಧಿಪ್ಪು-ಕಲಿಗೆ
 ಕಲಿಯುಗ ವಿಪರೀತನ್‌
 ಮಾಧವನೀತನ್ ಪೆರನಲ್ಲ ॥

The Sanskrit scholars of this time are Ravikirti, Vijiika and Akalanka. Kaumudi Mahotsav, was written by Pulakeshi II's daughter-in-law, poetess Vijiika, and Hara Parvatiya of Shivabhattacharaka are important Sanskrit dramas.

The Chalukyas of Badami were great builders as well as art-lovers. They built beautiful temples at Badami, Aihole and Pattadakallu. They developed a special style of sculpture called 'The Chalukya Style' in Indian architecture. They built cave-temples in the rocks of Badami. They encouraged many artists and sculptors.

The best temples in the Chalukya style are in Aihole and Pattadkallu. Aihole was one of the cradles of temple architecture. Evolution of the series of temples architecture was first experimented here. This style

found its full expression at Pattadakallu. Thus we see the famous temples of Lokeshwara (Virupaksha) and Trilokeshwara (Mallikarjuna) here. We get conclusive proof of the Chalukyas' artistic achievement in the towering sculptures of Vishnu, Varaha, Harihara and Ardhanarishwara in the caves of Badami. Even painting received encouragement. The Ajanta paintings of this period are world-famous.



Virupaksha Temple, Pattadakallu

The Pallavas of Kanchi (350 A.D. to 895 A.D.)

The Pallavas are the first kings of Tamilnadu. They enjoyed a special place among the dynasties which ruled South India. They ruled from the 4th century to the 9th century. In the beginning, they were the officials of the Shatavahanas. When the Shatavahana dynasty declined, the Pallavas declared themselves kings of the territory.

Shivaskandavarma was the first king of this dynasty. The Pallavas and the Kadambas harboured perpetual enmity towards each other. Subsequently, Pulakesh II of the Chalukya dynasty defeated Mahendravarma

of the Pallava dynasty. Narasimhavarma I who came later, was the most famous of the Pallava kings. He took revenge on the Chalukyas by defeating Pulakeshi II and capturing Vatapi. These daring acts won him the titles of Mahamalla and Vatapikonda. Hiuen Tsang had visited Kanchi during his reign. Narasimhavarma built a city on the sea coast near Kanchi and named it Mahabalipuram. Many monolithic temples were built by him. During the reign of Aparajita Pallava, Aditya of the Chola dynasty put an end to the Pallava rule.

The Contributions of Pallavas

They introduced systematic administration in Tamil Nadu. Their contributions are significant in literature, religion, art, architecture and education. When the Chalukyas reigned in Vatapi and the Pallavas in Kanchi, it was a heroic age in the South. Their kingdom was strong and organized. There were ministers and provincial officers. The kingdom had been divided into mandala, nadu and grama. The gramasabha dealt with the problems of the village. The gramabhojaka looked after the village administration.

The Pallavas encouraged both Sanskrit and Tamil. Kanchi was the center of Sanskrit literature. Bharavi (the author of Kiratarjuniya) and Dandi (the author of Dashakumar Charita) were the poets in the Pallava court. King Mahendravarma himself wrote a social drama, 'Matta Vilasa Prahasana' and a book Bhagavadujjuka. The Pallavas encouraged all religions.

The early Pallava kings were Buddhists. The great scholar of Nalanda University, Dharmapala, was born in Kanchi. Since Mahendravarma was a follower of Jainism, there were many Jains in the kingdom.

Shaiva and Vaishnava religious sects became popular during the 7th century. 63 Great saints called Nayanmars propogated the Shaiva faith. 12 Alva saints propogated the Vaishnava faith.



Mahabalipuram Pancharatha

This age witnessed the rise of the Bhakti movement. It also supported the renaissance of the Vedic religion. Slokas were written in Tamil. These have become the treasure of Tamil literature.

The Pallavas were lovers of art and architecture. They built many temples in their kingdom, which are noteworthy for their artistic skill. The Pallava architecture can be classified into temples that have been carved out of stone, and temples with structural pattern.

Many temples carved in rocks can be seen in Mahabalipuram. Wonderful monolithic sculptures have been carved in these temples. They tell the stories from Mahabharata and Bhagavata. The Pancharathas are the famous monolithic temples. The carving of 'Arjuna's Meditation' has emerged as an excellent work of art.

The temples of Kailasanath, Ekambarnath and Vaikunta Perumal at Kanchi, and the coastal temple at Mahabalipuram are excellent examples of ancient Indian architecture.

The temples became centres of religious and artistic activities. The rural folk gathered in the courtyard of the temples in the evenings and discussed many issues. The people came here during their leisurely hours and either listened to the Puranas or sang devotional songs. In this manner, the temples became social and educational centres.

The Pallavas had a good naval force. Merchants had trade relations with South Asian countries like Malaya, Indonesia and others. We can see the influence of Indian language, faiths, traditions and culture in those countries.

Exercises

I Fill in the blanks:

- 1 The Pallava king who was defeated by Pulakeshi is _____.
- 2 The dynasty which gave the name *Karnataka* is _____.
- 3 The writer of the Sanskrit drama *Hara Parvatiya* is _____.
- 4 The Pallava king who earned the title *Vatapikonda* is _____.
- 5 The painting *The Meditation of Arjuna* is in _____.

II Answer the following questions in brief:

- 1 How did Pulakeshi II extend his empire?
- 2 Describe the administrative system of the Chalukyas.
- 3 The Chalukyas were lovers of literature. Explain with examples.
- 4 Name the Pallava kings who ruled from Kanchi.
- 5 How did the Pallavas encourage Sanskrit and Tamil?

III Activities:

- 1 Discuss in groups the contributions of the Chalukyas to Kannada language.
- 2 Learn about *tripadis* from your Kannada teachers and by reading Kannada books.
- 3 Pay a visit to Kanchipuram and Mahabalipuram.

IV Projects:

- 1 Pay a visit to a place of historical importance and collect information about it.
- 2 Draw pictures of temples, collect pictures and form an album.

CHAPTER-11

THE RASHTRAKUTAS OF MANYAKHETA AND THE CHALUKYA'S OF KALYANA

After studying this chapter you learn about:

- Dantidurga, the founder of Rashtrakuta dynasty and Amoghavarsha its most famous ruler.
- the contributions of Rashtrakuta's to administration, literature and architecture.
- the administration and literary contributions of Kalyana Chalukyas.
- the extent of Rashtrakuta territory from the map of India.

The Rashrakutas (753 A.D. to 973 A.D.)

The Rashrakutas were Kannadigas. They were the tributary kings of the Chalukyas in the beginning. Later they became famous as the rulers of the vast kingdom in the South. The Rashrakuta age is a glorious epoch in the history of Karnataka. The credit of taking the glory of Karnataka to its peak goes to them. Their kingdom, which extended from the Narmada river in the North to the Cauvery river in the South, has also been immortalized by the Kailasanath temple at Ellora and by the first Kannada work, Kaviraja Marga.

The kingdom which began with Dantidurga, continued with Krishna, Govinda II, Dhruva, Govinda III, Amoghavarsha and others, and reached its peak. The early reign of Amoghavarsha had to face many obstacles. But he was not interested in feuds and desired peace. Hence he got rid of the enmity by developing marital relations with the Gangas and the Pallavas. Since he was a peace-loving king, he had to give up some territories in the north. The ports of the west coast were busy trading centres and enjoyed great prosperity by developing trade relations with Persia and Arabian. Many travellers and merchants visited the kingdom during this period. Prominent among them was the Arab traveller Sulaiman. He has praised Amoghavarsha as 'One of the four powerful emperors of the World.'

Amoghavarsha was brave and peace-loving, and encouraged all faiths. After him, Krishna II, Indra III and Krishna III ruled the kingdom.

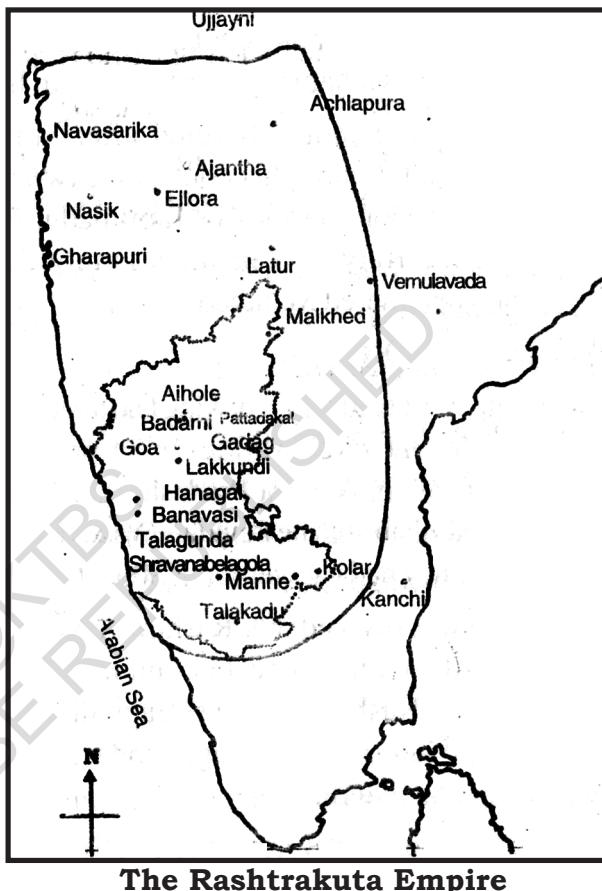
The weakness in administration during the period of Karka II paved the way for the rise of his tributary Tailapa II of the Kalyana Chalukyas and brought the end of the Rashtrakuta rule.

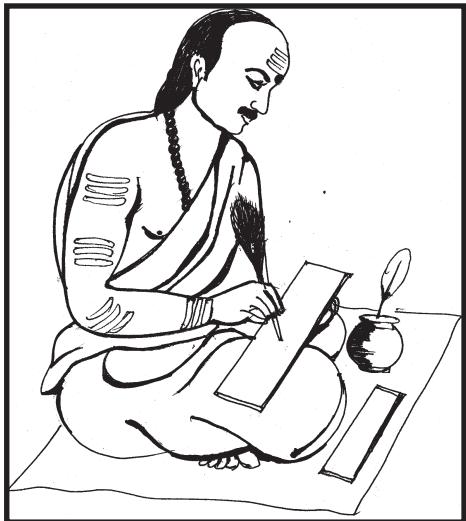
The Contributions of the Rashtrakutas

The kingship among the Rashtrakutas was hereditary. There used to be a Council of Ministers to assist the King. There would be a prominent person in the Council of Ministers appointed as the Mahasandhivigrahi to look after the foreign affairs. For the purpose of administrative convenience, the kingdom was divided into Rashtra (Mandala), Vishaya, Nadu and Grama.

The leader of the grama was called gramapati or prabhugavunda. He was the leader of the village army too. He was assisted by the village accountant. There were grama sabhas also. There used to be an official called nadagavunda in the nadus. Similar officials would be there in the vishayas and rashtras. The vishayapati and the rashtrapati were the officers for the vishaya or the district and the rashtra respectively.

Land revenue, toll on goods, houses, shops, and tax on occupations like operating ferries, formed the income of the kingdom. Foreign trade also brought in lot of taxes.





Nadoja Pampa

The Rashtrakutas encouraged both Kannada and Sanskrit. Excellent works were written in Sanskrit. Trivikrama wrote Nalachampu, the first champu work in Sanskrit literature. Halayudha wrote 'Kavirahasya'. Jinasena, mathematician Mahaveeracharya, grammarian Shakatayana, Gunabhadra, Veerasena were in Amoghavarsha's court. Pampa, known as Adikavi wrote Adipurana and Vikramarjunavijaya in Kannada. Ubhayakavi Ponna composed 'Shanti Purana'. Shrivijaya, who was in the court of Amoghavarsha, wrote 'Kavirajamarga'. This is a very significant work in Kannada. All these reveal how Kannada literature has developed from ancient times.

The Kannada University, Hampi, has been awarding the title of Nadoja in memory of the first poet, Pampa, to veteran achievers in Karnataka every year.

Another noteworthy prose work of the Rashtrakuta period is Vaddaradhane. The author of this is Shivakottacharya. It is a collection of Jain religious stories. Special importance has been given to use of native Kannada words here. There is liveliness in plot, structure, characterization and dialogue. This is a great prose work belonging to the pre-Pampa age, and enjoys eternal significance in the history of Kannada literature.

Agraharas and mathas were the prominent educational centres in those days. Knowledge was imparted about Sanskrit, the Vedas, astrology, logic and the Puranas. Salotgi in Indi taluk of Bijapur district was one of the leading centres of learning.

The Rashtrakuta kings were devotees of Shiva and Vishnu, and have built many Shiva and Vishnu temples. Jainism had received royal patronage and became a wide-spread religion. Apart from these even other religions were encouraged.

The Rashtrakuta kings were patrons of art. Their great contribution to Indian art can be seen in the Ellora and Elephanta cave temples. The Kailashnath temple at Ellora built by Krishna I is a monolithic wonder. This temple has been carved from a rock 100 feet high, 276 feet long and 154 feet wide. Nearby is the famous Dashavatara cave temple. The sculpture at the Elephanta caves near Mumbai is a milestone in the Rashtrakuta sculpture. The statues of Ardhanarishwara and Maheshamurti (three-murthy) have been exquisitely carved. The Rashtrakuta temples are in Shiravala of Raichur district. There is a beautiful Jain temple at Pattadakallu.



Kailasanatha Temple, Ellora

The Chalukyas of Kalyana (973 A.D. - 1189 A.D.)

The period of the Chalukyas of Kalyana enjoys an honourable place in the history of India. They gave special encouragement to art, literature and education. They provided opportunities for the development of Kannada and Sanskrit. They gave patronage to famous Kannada poets like Durgasimha, Ranna, Nagachandra and others. Vachana literature came into prominence during this period. The credit for building a new city called Kalyana and making it the capital goes to Someshwara-I.

Tailapa-II who had been a tributary king of the Rashtrakutas, defeated the Rashtrakuta king, Karka -II, and, capturing Manyakheta, established the kingdom of the Kalyana Chalukyas. He ruled for approximately 24 years. Someshwara - I is one of the important kings of this dynasty. He built a new city called Kalyana and made it his capital. This is today's Basava Kalyana in Bidar district. Though Someshwara-I had to wage many wars, he took care to see that his kingdom did not shrink in any way. He defeated Rajadhiraja Chola in 'Koppam'.

Vikramaditya-VI son of Someshwara-I, is the greatest king of this dynasty. He was an extremely courageous warrior and excellent administrator. He began the 'Chalukya Vikrama era' in 1076 A.D. He suppressed the revolt of the Hoysala King Vishnuvardhana. He had established contact with the Srilankan King Vijayabahu.

Vignaneshwara (the author of Mitakshara) who lived during his time has remarked that there was never a great city like Kalyana in the past and can never be in the future. The king like Vikramaditya has never been seen nor heard of.

The kingdom began to decline during the period of kings who came after Vikramaditya VI and Someshwara II. It became very weak during the period of Someshwara IV and Kalachuri Bijjala occupied Kalyan and began to rule it. It was at this time that the social revolutionary Sri Jagajyoti Basaveshwara came to the limelight. He devoted his life to spreading the values of the Veerashaiva sect to the common people.



Coins

Mints were set up in Lakkundi and Sudi to mint coins like gadyana, pana, drumma, pon and suvarna.

Basaveshwara preached in three forms: soft advice, harsh criticism, strict warning. He taught that surrendering oneself to Shiva with total devotion was the only path to salvation. He declared that work is worship. He established Anubhava Mantapa in 1162 A.D. He wrote his vachanas in simple Kannada that resembled the spoken language of the common people.



Jagajyothi Basaveshwara

The Contribution of the Kalyana Chalukyas

Like the Chalukyas of Badami, the Chalukyas of Kalyana too have made special contributions in various fields. The kingship was hereditary. The kingdom was divided into provinces (mandala) and small provinces (nadu). There were kampanas (today's hobli) to enable smooth functioning of administration of villages.

Land revenue was the main source of income for the kingdom. The other sources of income included sales tax, toll and tax on professions. There was an officer called 'Kaditavergade' appointed to look after collection of land revenue. There were different guilds in trade and business.

Literature received encouragement during the period of the Chalukyas. Kannada literature prospered with the support of Jain scholars. The notable works of this period are 'Gadayuddha' (Sahasa Bheema Vijaya) written by Ranna, 'Panchatantra' written by Durgasimha, 'Vikramankadeva Charita' composed by Bilhana, 'Dharmamruta' composed by Nayasena and the legal work, 'Mitakshara', authored by Vignaneshwara. 'Manasollasa' written by King Someshwara III is considered a sanskrit encyclopaedia.

The unique contribution of the Chalukyan period has been the Vachana literature. Akkamahadevi, Allamaprabhu, Machayya and others were leading vachanakaras.

The Chalukyas were not only lovers of literature but also patrons of art. Their contribution in the field of art is vast. Famous temples like the Kashi Vishweshwara temple at Lakkundi, Mahadev temple at Itagi, Mallikarjuna temple at Kuruvatti, Trikuteshwara temple at Gadag are noteworthy examples of their art. The kings of this dynasty built innumerable temples and contributed to making the Kannada land home to fine arts.

Music and dance forms too prospered. During their period Musicians and dancers used to be appointed to serve in the court. Queen Chandralekha patronised many music scholars and dancers. 'Manasollasa' and the work of Jagadekamalla II 'Sangeeta Chudamani' discuss many topics related to music, dance, art and jewellery.



Kashi Vishweshwara Temple, Lakkundi

Exercises

I Fill in the blanks:

- 1 The founder of the Rashtrakuta dynasty was _____.
- 2 The Chalukya king of Kalyana who was responsible for the defeat of the Rashtrakutas was _____.
- 3 The author of 'Kavirahasya' is _____.
- 4 The famous poem written by Ponna is _____.
- 5 The most famous king among the Kalyana Chalukyas was _____.
- 6 The person who can be called 'the pioneer of the social revolution' is _____.

II Answer the following questions:

- 1 How was the administrative system of the Rashtrakutas?
- 2 Write about the educational system under the Rashtrakutas.
- 3 Write about the Ellora temple.
- 4 How did the Kalyan Chalukyas encourage literature?

III Activities:

- 1 Share from the experiences of students or teachers who have visited temples of the Rashtrakuta period.
- 2 Go on a trip to Manyakheta or Ellora.

IV Projects:

- 1 Discuss on Ellora in peer groups and write an essay on it.
- 2 Collect pictures of Manyakheta.
- 3 Write an essay on the life of Basavanna.

CHAPTER – 12

THE CHOLAS AND HOYSALAS OF DWARASAMUDRA

After studying this chapter you learn:

- about expansion of chola empire and the contributions to different fields.
- about the establishment of Hoysalas, contribution to religious, literature, art, and architecture field.

THE CHOLAS (850 A.D. - 1279 A.D.)

After the Pallavas, the Cholas secured a firm hold on many areas in Tamilnadu, Andhra and Karnataka and ruled from the 9th century to the 13th century. To them goes the credit of spreading Indian culture in foreign lands. They constructed grand temples.'Brihadeeshwara' temple is their contribution. They became famous by encouraging Tamil literature.

The Cholas were under the Pallavas for sometime and later became independent. According to Sangam literature, Karikala Chola is the founder of this dynasty. Vijayalaya Chola revived the kingdom and made Thanjavur as his capital.

An important king among the Cholas was Rajaraja I. He was a brave, great warrior and able administrator. As the founder of the Chola empire, he strengthened its foundations and expanded his kingdom. He overpowered the Cheras, Gangas and Pandiyas. Building a naval force, he captured Sri Lanka. We can see the predominance of the Tamilians in Malaysia and Singapore. Their influence in the political, economic and cultural activities of those countries can be seen. They began overseas trade which continued till date. The Brihadeeshwara temple built by Rajaraja Chola I in Thanjavoor, is a very famous one.

The Chola empire weakened during the period of Rajendra Chola III, and the Pandiyas could overpower them easily.

The Contribution of the Cholas

The Cholas had set up an able and efficient administrative system. The kingdom had been divided into mandalam, kotwangi, nadu, kurram or community of villages and tara-kurram. There was a committee of subjects called Ur in every village.

The foremost quality of the Chola administration was the development of the self-governance of the village. The grama sabhas were the first sabhas. Tara-kurram was a village. Every kurram had a village committee named mahasabha. This was also called perumguri and its members perumakkal. The members were chosen through election. Only Sanskrit scholars and rich people were allowed to stand for election.

One-sixth part of the land revenue used to be collected as tax. Special attention had been given to the irrigation system. The Cholas constructed many lakes, and the Bellandur lake near Bangalore is one of these. They built a huge pond in Gangaikonda Cholapuram.



Brihadeeswara temple, Thanjavoor

The Cholas were Shaivites, and they built many Shiva temples. The Brihadeeswara temple in Thanjavur is 500 feet tall and it is in a courtyard 250 feet wide. Its shikara is 200 feet tall. The Choleshwara temple was built by Rajendran.

The Aprameya temple near Channapatna, the Choleshwara temple in Begur near Bangalore and the Mukteshwara temple near Binnamangala are the temples built by the Cholas in Karnataka. The temples used to function as economic and cultural centres. The idols of Shiva, Ganapati, Vishnu, Durga and Kartikeya of this time are famous.

The Cholas established many agraharas to encourage education. The Uttaramerur agrahara is famous among these. The temples were centres of education. They were also centres of religious activities. This was a period in which Tamil literature found an all-round development. Noteworthy works are Ramayana written by Kamba, Periya Purana composed by Sekkilar and Thirukkadeva's Jeevika Chintamani.

THE HOYSALAS OF DWARASAMUDRA (984 A.D. TO 1346 A.D.)

After the Chalukyas became weak in Karnataka, it was the Hoysalas who became strong. The founder of this dynasty, Sala, on the order of a Jain monk, Sudatta, fought with a tiger and, killed it near Sosevuru village (today's Angadi) in Mudigere taluk of Chikmagalur district. It inspired the people to exclaim 'Hoysala!', and he established this empire. These kings made significant contributions to literature, education, art, architecture and irrigation.

Vishnuvardhana was the important Hoysala king who came after Nrupakama, Ereyanga and Ballala. As a great king of this dynasty, he won Gangavadi from the Cholas and earned the title 'Talakadugonda'. In order to commemorate this victory, he built the Kirtinarayan temple in Talakadu and the Chennakeshava (Vijayanarayana) temple at Belur. He tried to expand his kingdom but was defeated by the Chalukyan king Vikramaditya VI.



The emblem of the Hoysalas

Ramanujacharya could not spread the message of Vishishtadvaita sect in the Chola kingdom and came to Bittideva's (Vishnuvardhana) court, and under his patronage, spread his faith in the whole of Karnataka.

This kingdom declined during the reign of Ballala III. During the same period, the Vijayanagara empire came into power.

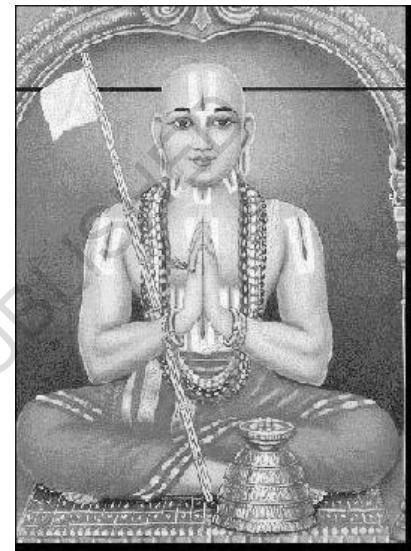
The Contributions of the Hoysalas

The Hoysalas had brought into practice provincial system of administration. The power to rule was given to the Prince, Queen and the Royal family. The officials looked after the administration of the nadu and vishayas. In the villages, there used to be the representatives of the government like the gowda, senabova, talawara and others.

In order to encourage agriculture, the Hoysalas built innumerable lakes like the Shanti Sagara, Ballalaraya Samudra, Vishnu Samudra etc. In the cities, there used to be guilds among the people following different occupations. Land revenue was the main source of income for the kingdom. A unique feature of this society was that the king used to have a special army of guards called 'garuda'. When the king died, these guards would also sacrifice their lives.

Agraharas, mathas and temples were centres of education. There were excellent educational institutions at Melukote, Salagame, Arasikere and other places. Here study of the Vedas, Vedashastras, Kannada and Sanskrit used to be carried on.

Kannada literature flourished immensely. Rudrabhatta wrote 'Jagannatha Vijaya', the great poet Janna wrote 'Yashodhara Charite', Harihara composed the Champa poem 'Girija Kalyana', Raghavanka authored 'Harishchandra Kavya' and Keshiraja wrote 'Shabdamanī Darpana'. Even in Sanskrit, memorable works composed were Sreebhasya by Ramanujacharya and Parasharabhatta, composed Sri Guna Ratnakosha.



Ramanujacharya

During the period of the Hoysalas, different religions like Jainism, Buddhism, Shaivism, Vaishnavism, Veerashaivism and Srivaishnavism were encouraged.

This poem from the Belur temple advocates communal harmony:

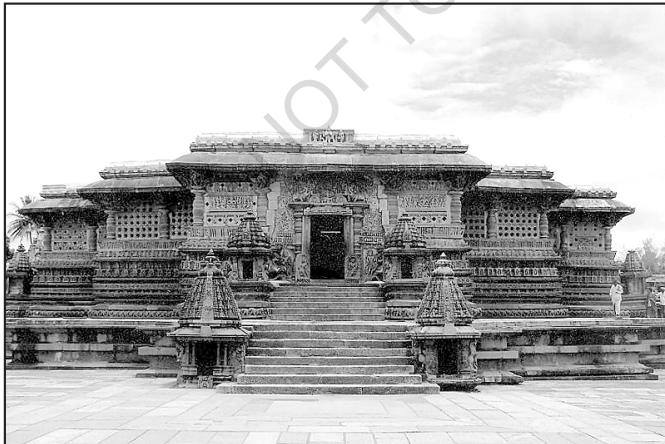
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ನಿರ್ಮಾಂಕಣವನ್ನು ಪಾಲಿಸಲಿ.

The architecture of the Hoysalas is world-famous. The Hoysalas got their innumerable temples built in soap stone. There are five features that can be seen in all their temples. They have the star-shaped sanctum sanctorum, upa-peetha (jagati), decorative panels, shikara and pillars.

There are beautiful idols of Madanikas (Shilabalikas) on the brackets of the pillars of Chennakeshava temple at Beluru.



Chennakeshava temple, Beluru



A shilabali

The military general, Ketamalla, built the Hoysaleshwara temple at Halebidu. The Keshava temple constructed by Somadandanayaka at Somanathapura is famous. There are many temples and basadis in Arasikere, Govindanahalli, Doddagaddavalli and Bhadravati. All these are noted for their extremely delicate carving. The Hoysala architecture has influenced all other architectural styles of the later years. Dasoja, Chavana, Jakana and Dankana were some of the famous sculptors of this time.

Exercises

I Fill in the blanks.

- 1 The capital of the Cholas was _____.
- 2 The committee of the subjects in every village during the period of the Cholas was _____.
- 3 The most famous Chola educational centre or agrahara was _____.
- 4 The temple in Begur near Bangalore built by the Cholas was _____.
- 5 The army of bodyguards during the time of the Hoysalas was _____.
- 6 The poem written by Raghavanka _____.

II Answer in brief the following questions.

- 1 Who was the founder of the Chola kingdom?
- 2 Write a note on the significant features of the Chola administration.
- 3 Describe the encouragement given by the Hoysalas to literature.

III Activities.

- 1 Discuss in class the visit you paid to a nearby temple.
- 2 Learn more about the Belur *shilabalikas* from your teacher.

IV Projects.

- 1 Visit Belur and Halebidu and write a project-report on it.
- 2 Learn in detail about Hoysala art.

POLITICAL SCIENCE

CHAPTER-1

MEANING AND IMPORTANCE OF POLITICAL SCIENCE

After studying this chapter you:

- understand the concept of political science.
- explain the process of development in political science.
- Know and recognise the political thinkers and their contributions.
- Know the importance of political science.

Political science is one of the social sciences dealing with the political activities of man. It deals with the state and government. It studies the origin and nature of state and forms of political institutions. The study of state is the main subject matter of political science.

As a subject of the study of political science began with the Greeks. though Egyptians, Babylonians, Persians, Indians and Chinese have mentioned their ideas or thoughts about politics much earlier to Greeks they failed to develop it as a systematic study. Politics was given status of an independent science by Greeks. Greek philosophers like Socrates and his disciple Plato were great political thinkers. Plato in his famous book "Republic" for the first time discussed the nature and functions of state and government. Aristotle, the ancient Greek thinker and the student of Plato is recognized as the 'Father of Political science' for his valuable contributions to its growth and development. He wrote the first treatise on political science called "The Politics". In this famous book Aristotle discussed the origin, development and functions of state Kautilya's work on economics was also had more information about political principles.

Greeks used the term 'politics' for the study of state. The term 'Politics' is derived from the Greek word 'polis' which means 'city-state' and therefore a subject which deals with the affairs of city-state and its working was called politics by ancient Greece. However in modern times scholars have preferred to use the term 'political science' for this study.

Now a days the word 'Politics' refers to the practical aspect of the problems of the state and government. More exactly, it means the actual political activities taking place in a state. Current problems of the state, election campaigning, political party activities, the day to day happenings in the state legislature or in the union parliament in which the politician takes part, etc comprise politics. Whereas, the discipline of political science is a study of origin and development of the state, the functions of government, rights and duties of citizens etc. Hence the proper title of this subject of study must be 'political science'.

It is the study of the state in the past, present and future, of political organization, political functions and political theories.

Thus we find that the state, government and other problems connected with them fall within the purview of political science.

Importance of Political Science

The knowledge of Political Science is most essential in the present age. The progress and development of a state depends upon the thinking, knowledge and Political involvement of the people.

- Political Science helps to understand the birth and growth of a state. It provides information about the type of Governments and Political activities involved in the functions of the State.
- Political Science provides information about the origin and development of ideas such as Monarchy, freedom, justice, laws, equality, good government, wars and peace etc.
- It provides information about the structure and functions of the state and central governments.
- In the light of the past and the present activities of the government, Political Science helps to plan the future activities of the state. It also helps to establish a modern welfare state.
- Political Science provides knowledge about the Constitution and laws of the state.
- Political Science helps to understand about the organs of the government i.e., Legislature, Executive and Judiciary and their functions.

- Political Science develops Political consciousness among the people. It keeps the government and the people politically alert and active.
- The knowledge of Political Science helps leaders and civil servants to understand and solve the problems of the people effectively.
- The knowledge of political science helps to raise good leadership and good citizen.
- Political Science helps to understand the important Political institutions like political parties, federations and local bodies.
- Political science deals with ideologies which inspire and influence political involvement of people.
- Political Science provides the knowledge of international relations especially the occurrence of wars among nations and the importance of peace and co-operation.

Thus the study of Political Science helps us to understand the need for a state, good governance of the state, the role of the leaders and people's participation. It helps the people to become good, responsible, cultured, and active citizens. The knowledge of Political science contributes to the establishment of a just, peaceful, progressive and a happy state, which is the dream of millions and millions of people for a long time every where.

Exercises

I Fill up the blanks:

- 1 The word Politics was derived from the Greek word _____.
- 2 'Republic' was the work of _____.
- 3 Aristotle wrote a book on political science and it is called _____.
4. Kaoutilya's work relating to political science is _____.

II Answer the following questions:

- 1 What is political science?
2. Who began the systematic study of Political Science ?
- 3 Who is called the Father Political Science?
- 4 Give definition of Political Science.
- 5 Mention use of the study of Political Science?

III Suggested Activities:

- 1 Prepare an album highlighting the nature of Political system in the early period.
- 2 Discuss the statement of Aristotle given in the book in your classroom with the help of your teacher.
- 3 'The social needs of man led to the rise of the state' – is it so ? Arrange a talk on the topic in your classroom.

IV. Project Work:

- 1 Imagine that you are a member of ancient Greek city state and discuss any one particular issue of the city state.
- 2 'Dictatorship suppresses the freedom of an individual and democratic institutions' - Collect information and prepare charts.
- 3 Collect information on political ideas found in our epics.

The outward freedom that we shall attain will only be in exact proportion to the inward freedom to which we may have grown at a given moment. And if this is a correct view of freedom our chief energy must be concentrated on achieving reform from within.

- **Mohandas Gandhi**

CHAPTER-2

CITIZEN AND CITIZENSHIP

After studying this chapter you:

- know the meaning of citizen and citizenship.
- differentiable between citizen and citizenship.
- differentiable between citizen and alien.
- know the methods of acquiring citizenship and reasons for losing citizenship.

Meaning

The meaning of citizenship varies from time to time. In ancient Greece the word citizenship had a narrow meaning. Then, it referred to those persons who took direct and active part in the administration of the state. In ancient Greece, citizenship was a privilege conferred upon selected few. Women, manual workers and slaves were denied all the rights of citizenship.

But in modern times the term citizenship conveys broader meaning. The term citizen, in modern times, refers to a person who is a fulfledged member of the state, enjoying all rights- civil, political and economic and owing allegiance to the state to which he belongs.

Vattel defines a modern citizen as a member of a civil society, bound to it by certain duties, subjected to its authority and an equal recipient of its advantages. Accordingly a citizen is a member of a state who, owes allegiance to it and enjoys the protection and benefits granted by it. Thus a citizen is a permanent member of the state, who possesses civil and political rights and owes allegiance to the state to which he belongs.

There is a difference between subjects and citizens. Before 1947 we were the subjects of the British. After independence we became the citizens of India. Generally people who belong to and live in a state are its citizens. To be a citizen proper one has to fulfil certain conditions which are legal. There is a relationship between the state and the citizens. The state provides protection and certain facilities to its citizens while the citizens in turn maintain the state, obey the laws and owe their allegiance to the State. A citizen is one who is a member of a state and enjoys certain benefits in his state. They are:

- He enjoys security and gets protection from the State.
- He enjoys a peaceful life as the state ensures law and order .
- In modern times under social welfare schemes he enjoys benefits like education, health, insurance, settlement, employment and such others provided by the state.
- He enjoys both the civil and political rights.
- He enjoys the fundamental rights guaranteed by the State.
- He can participate in the Political processes like voting and contesting in the elections.
- He is eligible to occupy certain offices such as those of the President of India, Vice-President, Judge of Supreme court, High Courts and such others.
- He is eligible for recruitment to all public services.

Difference between a citizen and an alien

A citizen is a member of the state. He owes allegiance to it. He is protected by the state and enjoys civil and political rights. An alien, on the other hand, is one who has come to reside temporarily in a state. He owes allegiances to the state of his origin. He is a foreigner in the state of temporary residence but a citizen of the state from which he has come.

The chief differences between the citizen and alien are the following:

1. Citizens are permanent residents of their state. Aliens are temporary residents.
2. Citizens enjoy political rights, aliens are not given political rights like right to vote, right to contest election, right to hold public offices, etc.
3. Citizens owe allegiance to their state. They are bound to fulfil their obligations to the state. An alien is a foreigner who is a citizen of another state. He should respect and follow the laws of the state in which he is temporarily living.
4. A Citizen cannot be driven out of his state. An alien can be asked to leave the country of temporary residence for various reasons such as illegal activities, expiry of visa period, etc..

Methods of acquiring citizenship

There are two ways of acquiring citizenship namely- by birth and by naturalization.

1. By Birth: The most important mode of acquiring citizenship is by birth. The great bulk of citizens in every state are citizens by birth. Birth within the territory entitles a person to citizenship.

2. Naturalisation: Citizenship can also be acquired through naturalization. According to this method, an alien can become a citizen after fulfilling certain conditions. Though these conditions vary from state to state, some of the general principles which are observed may be summed up as follows:

- a) Domicile or Residence :** Long residence in a foreign state entitles a person to acquire the citizenship of that state. In England and USA it is five years. In France it is ten years.
- b) Marriage :** A woman acquires the citizenship of her husband's country when she marries a foreigner. But the husband does not get the citizenship of his wife's country. The condition of marriage in Japan and some other countries are quite different.
- c) Foreign service :** A person appointed in the service of a foreign state may be granted the citizenship of that country. Many countries do not permit the foreigners to serve in the public service for suspicion of their loyalty.
- d) Application :** In all states an alien may be granted citizenship if he applies for it and satisfies certain conditions. Usually, all states demand the applicant to be solvent and be a person of good moral character.
- e) Property :** A person who purchases property in a foreign country, desires to become a citizen of that country may be granted the citizenship. In Mexico there is such provision. But in recent times the foreign countries may not provide opportunities to foreigners to buy landed property.

Methods of acquiring citizenship in India

Parliament is the sole authority to legislate the laws on citizenship in our country. State legislatures have no powers in this matter. The Citizenship Act was enacted by the Parliament of India in 1955 and it elaborates the provisions for the acquisition and termination of citizenship. The Act was amended in 1986. This amendment made the acquisition of Indian citizenship more stringent. The Citizenship Act 1955 prescribes modes of acquiring citizenship. They are :

Citizenship by birth : Every person born in India on or after 26th January 1950 shall be a citizen of India by birth. Those who were born before 26th January 1950 and also domiciled in India were granted citizenship.

Citizenship by descent : Every person born outside India on or after 26th January 1950 shall be a citizen of India by descent if either of his parents is a citizen of India at the time of his birth.

Citizenship by registration : If any person who is not an Indian citizen, if he desires to become Indian citizen he can acquire the Indian citizenship as per the constitution or The Act of Citizenship through Registration.

Citizenship by naturalization : Foreigners can acquire Indian citizenship by naturalization by submitting an application to the concerned authority i.e. the President of India. Certain conditions have to be fulfilled by them before submitting the application. They should have lived in India for not less than the period of five years.

Citizenship by the incorporation of a new territory : If any new territory becomes a part of Indian union, then the government of India by an Act notifies the persons as to whom Indian citizenship is granted.

Loss of Citizenship : Just as citizenship may be acquired, it can also be lost for a variety of reasons. Some of the important ways of losing citizenship may stated as follows:

Renunciation : Any Indian citizen can renounce his citizenship voluntarily by submitting an application before the concerned authority.

Termination : If any citizen of India acquires the citizenship of any other country his Indian citizenship is terminated by law. This procedure does not require the submission of any application.

Deprivation : If any person has obtained the citizenship of India by fraud or if he/she has indulged in anti national activities or shown disloyalty towards the Constitution of India, the government of India deprives him/her of his/her citizenship. It is forced termination.

Types of Citizenship : There are two types of citizenship. They are single citizenship and dual citizenship. In single citizenship people

have only one citizenship that is National citizenship irrespective of the province that he belongs to. There is no separate state citizenship for e.g. India. In federal states like USA and Switzerland there is dual citizenship. That means every individual obtains state citizenship in which he lives and national citizenship also.

Citizen and the Government : There is a close relationship between the state and the citizen. There is no state without citizens. The state or the government protects the interests of the people. It provides protection from foreign aggression. It maintains law and order and promotes unity. It frames the laws and curbs aggressive elements and violence so that peace can be maintained in the state. It undertakes social, economic plans and educational programmes for the benefit of its citizens. It plans and undertakes programmes to overcome the problems of illiteracy, poverty, inequality and unemployment etc. In addition the Constitution guarantees fundamental rights.

The citizens have certain duties towards the nation. Rights and duties are like the two faces of the same coin. A citizen derives many benefits from the nation. Similarly he has certain obligations and functions to perform.

- He must respect the Constitution and obey the laws of the government.
- He must protect the national honour and dignity by his words and deeds.
- He must not indulge in anti-national activities.
- He must oppose and check the evil practices like corruption, nepotism, dowry, child marriage, etc., through constitutional means.
- He must take part in the political activities of the state as the quality of the government depends on the quality of citizens.
- He must place the national interest above the personal interest and work for national progress.
- He must be service minded and must be prepared to sacrifice for the sake of nation.
- He has the obligation like paying taxes and defending the nation.

In addition to these functions certain fundamental duties are incorporated in our Constitution. The purpose of these fundamental duties is to make citizens aware of their social and economic obligations. It also helps the citizens to understand as to what they should do or what he should not do in the interests of the country. So a citizen should follow and practise these fundamental duties in the interests of community, nation and their own progress. There should be a cordial relationship between the citizens and the government. It should be based on the principle of give and take.

Fundamental duties are incorporated in our constitution in 1976 through 42nd amendment. The fundamental duties are included under article 51(A).

Exercises

I Fill in the blanks with suitable words:

- 1 The people living in India under the British rule were termed as _____.
- 2 A temporarily residing foreigner in our country is called _____.
- 3 Citizenship Act was passed in the year _____.
- 4 The method through which you have acquired citizenship is _____.

II Answer the following questions briefly :

- 1 What is citizenship ?
- 2 What are the benefits enjoyed by a citizen ?
- 3 Name the body which has the authority to legislate the laws on citizenship in India.
- 4 Mention the methods of acquiring citizenship.
- 5 Explain citizenship by naturalisation.
- 6 What are the methods of losing citizenship ?
- 7 Mention a situation under which citizenship is terminated.
- 8 Mention the types of citizenship and write the differences between them.
- 9 What are the duties of a citizen towards his nation ?

III Suggested Activities :

- 1 Prepare a pictorial representation of the fundamental duties and exhibit it in your school.
- 2 Discuss the benefits of fundamental rights under the guidance of your teacher.
- 3 Discuss the importance of right to equality and right to freedom in India (under the guidance of your teacher).
- 4 Prepare a pictorial chart showing the methods of acquiring and losing citizenship and exhibit it in your classroom.
- 5 Discuss the benefits of single citizenship in India.
- 6 Supposing the dual citizenship as in US is introduced in India, how does it benefit us? Discuss.

IV Project Work :

- 1 Collect information from the newspapers and magazines about the violation of fundamental rights and the remedial measures taken.
- 2 Collect information from the authorities concerned about the procedure to be followed by an Indian if he wants to stay in a foreign country for a short period of time.

Who makes us ignorant? We ourselves. We put our hands over our eyes and weep that it is dark.

- Swami Vivekananda

CHAPTER-3

DEMOCRACY

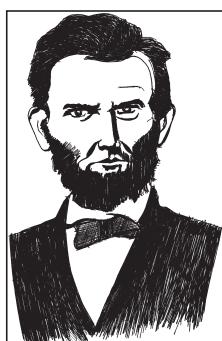
After studying this chapter you:

- know the meaning of democracy.
- understand the features of different types of governments.
- Identify the different types of democracy and their differences.
- explain the features, success factors of democracy merits and demerits of democracy.
- explain adult franchise system and general election system in India.
- describe the duties and responsibilities of political parties in a democratic system.
- analyse the responsibilities of mass media in democracy.
- know about Right to Information Act - 2005.

Democracy is one of the ancient forms of government. Many revolts and revolutions have taken place in the world to establish the democratic form of Government. The word 'Democracy' is derived from the Greek word Demokratia meaning 'Rule of the people'. Elections play an important role in democracy. Elections provide an opportunity to the people to form their own government. It works on the principle of one man, one vote. The government is formed by the people and the people are the decision makers. Abraham Lincoln, the former President of USA has defined democracy as 'a government by the people, of the people and for the people.' Democracy is a form of government where the supreme power belongs to the people.

Different forms of Government

Monarchy: Monarchy is an old form of government. In monarchy the king heads the government. He enjoys vast powers. He is the law maker. This type of monarchy is called 'absolute monarchy'. In Qatar, Kuwait and in some of the countries of Arab world absolute monarchies still exist. In the contemporary period the constitutional monarchy exists in Japan and England. In Constitutional monarchy the elected house is the law making body, where a the king/queen remains as the nominal head.



Abraham Lincoln

Dictatorship: Dictatorship is the other form of government. Adolf Hitler in Germany and Benito Mussolini in Italy were dictators. In dictatorship the authority rests in the hands of one individual who is not crowned. The dictators have scant respect for democratic values and principles.

Military Dictatorship: In military dictatorship the political power rests with the highest military authority. The people are denied the freedom of expression, freedom to criticizing the government policies and forming associations. Media and Judiciary are controlled by the military. Earlier it was existant in Pakistan.

Communist Government: The people have regulated freedom in this kind of government. Political parties other than communist party do not exist. There is no scope for private ownership. All means of production are nationalized. In China, North Korea and Cuba communist governments are functioning.

All forms of governments have merits and demerits. In democracy merits are more than demerits. It has greater faith in common man and his potentiality. These advantages have made democracy a popular form of government.

Types of Democracy : There are two types in Democracy. They are direct democracy and indirect democracy (Representative Democracy).

Direct Democracy: In direct democracy the people directly participate in electing their government, making polices and laws for their own progress and development. The system of direct democracy can be practised only in countries of small size and population. This system was practised in ancient Greece and presently practised in Switzerland. Direct democracy becomes more effective through referendum and initiative. Direct democracy is difficult to practise in India because of its vastness and size of the population.

Indirect Democracy: Indirect Democracy is most suitable in bigger nations like India, USA and such other nations. In indirect democracy the people elect their representatives through periodical elections and send them to legislative bodies. These representatives involve in the process of law making and also control the administration. Democracy is defined as a government by the elected representatives through elections conducted from time to time. The elected representatives in turn elect their leader and also the highest executive of the country.

Characteristics of democracy

- Democracy is based on the consent of the people.
- It is representative government where people elect their representatives and they make laws.
- It is based on the principle of universal adult franchise.
- Elections are held at regular interval in a free and fair manner.
- Citizens enjoy fundamental rights, hence there is scope for individual development.
- The government is responsible to the people.
- People have the right to change and challenge the government.
- There is rule of law and government's powers are limited constitutionally.
- It recognizes political parties and entrusts special responsibility on the opposition party.
- It upholds the sense of dignity in the common man.
- The main basis of democracy are liberty and equality. The people enjoy maximum liberty and equality. In democracy there is no disparity among the people on the basis of caste, religion and position or status.
- In democracy, people are the ultimate source of sovereignty (supreme power), and government derives its power from them. For this purpose elections are held at certain intervals. In India general elections take place ones in five years.
- Democracy is a welfare state and in it special attention is paid to the welfare of the people as a whole and not to a particular class.

Factors essential for the success of democracy

- People should have an urge to protect democracy.
- People must always be vigilant.
- Tolerance is one of the basic qualities needed for the success of democracy. They must work with the spirit of give and take.
- Success of democracy depends upon good leadership. The

leaders must have the ability to understand the problems of the common man. He must possess the qualities of service, patriotism and spirit of sacrifice.

- Efficient opposition party keeps the governments alert. It checks the ruling party from becoming dictatorial.
- Well informed and educated electorate contribute to the success of democracy.
- Success of democracy depends upon the role of the people. People must compulsorily vote during election. People must be free from corrupt practices. The people must elect efficient and non-corrupt representatives who can solve their problems.
- Free, fearless and unbiased press contributes to the success of democracy.
- Well organized, efficient and responsible local bodies strengthen democracy.

Merits of Democracy

Many countries have accepted democracy as the best form of government because of its merits. The merits of democracy are as follows:

- It protects the rights and independence of the people through an independent judiciary.
- It is based on the principles of equality.
- It provides an opportunity to people to involve themselves in decision making and framing laws.
- People elect representatives and the government of their choice.
- Decisions are taken after debate and discussion. Decisions are based upon public opinion.
- Opposition checks the misuse of power by the government.
- The fundamental rights provide an opportunity for the development of the personality of an individual.
- It brings about a peaceful change of government through elections and thus reduces the danger of revolution.
- Democracy develops nationalism, patriotism, respect to people and creates unity in the midst of diversity.

Demerits of Democracy : Democracy has certain demerits or defects. The demerits in democracy are as follows:

- Lack of respectable educational qualification, managerial skills, leadership qualities, ignorance of social, economic, political issues and selfish attitude of the representatives weaken democracy.
- The competition among the political parties for power results in favouritism and corruption.
- Interests of the party becomes more important than national interest.
- Defections from one political party to another leads to unstable government.
- The caste factor, the use of money and muscle power in the elections weaken the government in the democratic set up.
- Law making in democracy is a lengthy procedure.
- Conducting elections is expensive and much time consuming.
- The majority party at times becomes dictatorial and the opinion of the minority is suppressed.
- The uneducated poor people are often exploited by the people in power.
- Anti-social elements exert influence on the government with their money and muscle power.

Universal Adult Franchise: In India we have representative democracy. Elections play an important role in a representative democracy. People have the right to vote in elections. In India voting right is provided to all people aged 18 and above, regardless of caste, qualification, creed, religion, language and gender.

Before 1989 the minimum voting age in India was 21 years. Through the 61st amendment of 1989 the voting age is reduced to 18 years from 21 years.

Good government always depends upon the voter. So the voter must not come under the influence of caste, creed, money or muscle power while voting. The voter must be careful while choosing a candidate. He must choose the candidate with good qualities and capabilities as stated below :

- The candidate must have a zeal and interest to serve the society.

- The candidate must have concern towards the problems of the people and should be easily approachable.
- The candidate must be educated, loyal, honest and service minded.
- The candidate must not be corrupt and must be a model to others in selfless service, character and actions.
- The courts should not have declared him/her as a criminal and he / she must be free from criminal activities.
- The candidate must not have indulged in anti-social and anti-national activities.

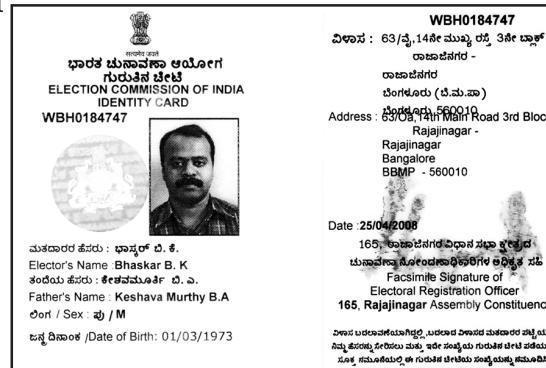
Elections

Elections are important in the democratic set up. Elections are held at periodical intervals. In India elections are conducted once in five years but this period varies from country to country. Elections conducted once in five years on routine is called General elections. If the elections are conducted to fill the vacant seats within the stipulated term of five years, such elections are called by-elections. The Election Commission is set up by the government of India through the constitutional procedures to conduct elections. Its headquarters is at New Delhi. Presently it has one Chief Election Commissioner and two Election Commissioners. They are appointed by the President of India. Parliament has authority to decide the number of Commissioners it should have. There is State Election Commission at the state level to conduct election to Panchayat Raj institutions.

Election procedure

Constituencies: The state is divided into small electoral divisions for the purpose of elections. These electoral divisions are called constituencies. Constituencies are formed on the basis of population. Constituencies are of two types. One is Lok Sabha Constituency and the other is Assembly Constituency. The members elected from Lok Sabha constituencies become the members of Lok Sabha. They are called Members of Parliament or MPs. Similarly the members elected from Assembly Constituencies become the Members of State Legislative Assemblies and they are called Members of Legislative Assembly or MLAs. In both these constituencies reservation is provided to SC, ST, backward communities and women. These are called reserved constituencies.

Voters list: The voters list which contains the names and certain other details of the voters is also called the electoral roll. The electoral roll is prepared by the Election Commission much before the elections. Electoral roll is revised once in five years. At the time of revision the names of those who have attained the age of 18 are included and the names of the dead are deleted. The electoral roll helps the polling officials to identify the voters.



The electoral photo identity cards (EPIC)

The electoral photo identity cards (EPIC) are issued to all the eligible voters by the Election commission to prevent impersonation. EPIC is also used as a proof for general identification. The voter must produce EPIC or any of the other identity proof such as PAN (Permanent Account Number) card of the Income Tax department, driving license, Passport or any other proof of identification specified by the government at the time of voting.

*The government of India has made arrangements to issue Bio-Metric based unique ID numbers to all citizens. This is called '**Aadhaar**' number.*

Notification: The election process begins with the notification. The Election Commission issues the notification about the elections to be held. The detailed schedule or time table of the election is published or notified in the government gazette and also in other media like radio, TV and news papers.

Nomination of the Candidates: As ours is a representative democracy people have the right to elect and right to contest. The candidates who wish to contest the election must fulfil certain conditions and file their nomination papers before the authority appointed for the purpose. Candidates must deposit certain amount of money as 'Security Deposit' along with their nomination papers.

The political parties choose the candidates to represent the party. The authorization given by the political party to contest the election is termed as party ticket. The contestants getting the party tickets have the advantages of using the party symbol and the party support in the campaign. Many a time the party ticket proves beneficial to secure good number of votes from voters who owe allegiance to a political party. The contestants who are not identified with any political party are called 'independent candidates'. Such independent candidates are allotted symbols by the election commission.

Scrutiny of Nomination: The nomination papers filed by the candidates are scrutinised by the appointed authority. After scrutiny the names of the eligible and also the rejected candidates are announced.

Withdrawal of Nomination papers: After the announcement of the list, the eligible candidates are given time limit to withdraw their nomination if they desire so.

Election Campaign: The election campaign or propaganda starts after the announcement of the final list of the candidates. The campaign must end forty eight hours before the closure of election. During the campaign the political parties announce several policies and programmes and promise the people to fulfil those if voted to power. Such kind of promises are given in the 'Election Manifesto'. Public meetings, door to door campaigns, banners, cut-outs, posters, pamphlets, flags and catchy slogans are common during propaganda. All the contesting candidates have to follow the 'model code of conduct' announced by the Election Commission.

Polling day: Polling day is the day of voting or day of election. On the polling day the voters go to the assigned polling booths to vote. Polling booth is a place of voting. Polling officials are appointed to manage the polling booths. In the polling booths 'Ballot papers' are provided to the voters to cast their votes. Ballot papers contain the names of the contestants and the election symbols allotted to them.



Picture of Electronic voting machine(EVM)

The election symbols help the illiterate masses and also others to identify the candidates.

Electronic voting machines (EVMs) are replacing the ballot papers now a days. The voters record their votes through EVMs. The ballot boxes or EVMs are sealed after the election and carried to the counting centres.

Counting of votes: Counting of votes is done at the counting centres by the counting officials in the presence of the candidates and their agents. Counting of votes has become easier and quick with the introduction of electronic voting machines. Under certain special circumstances recounting is permitted. In case of any disputes the candidates can approach the law courts. Returning officer declares the results at the end of the counting.

The returning officer is in-charge to conduct the election process in one designated constituency. He is appointed by the Election Commission. Presiding officers and polling officials are appointed to conduct the election in every designated booth.

Political parties: Political parties are necessary in the democratic set up. Political parties are a link between representatives, government and the people. They play a major role in formulating policies for social and economic progress. Political parties become a training ground to develop leadership qualities. The political party that commands majority in the lower house i.e. Lok Sabha at the centre and legislative assembly at the state level form the government. The party that forms the government is called the 'Ruling party'. The party that commands the second position is called the opposition party. The minor political parties or independents can support either the ruling party or the opposition.

National Parties: There are many political parties in India. These political parties are classified into national political parties and regional political parties. National political parties have their branches in many states of our nation. They have respectable number of representatives in parliament and also in state legislatures. The Election Commission grants recognition to national parties. Indian National Congress, Bharathiya Janata Party, Communist Party of India are some of the major national political parties of India. They established their identities through their own party symbols.

Regional Political Parties: Regional political parties are also called state political parties. Political organizations securing respectable number of seats in the assembly elections are recognized as state parties or regional parties. In many states the regional parties by virtue of their majority have formed the government. DMK, AIADMK (Tamilnadu), Assam Gana Parishad (Assam), Telugu Desham (Andhra Pradesh) Shiv Sena (Maharashtra) Janatha Dal (Secular) in Karnataka and Samajawadi party (UP) are a few major regional political parties. Regional political parties have their own election symbols.

Regional parties may have representation in the Parliament. Regional parties play an important role in forming the government when the major political parties fail to secure majority at the centre or the states.

Coalition Government: Many political parties participate in the elections to capture power. If they get the majority they form government. Many a time no party gets the required majority to form the government. Such a situation is called 'Hung Parliament' or Hung Assembly. In such a situation some of the political parties join together and make alliances to get the required majority to form the government. Such alliance is called 'Post-poll alliance'. At certain times two or more than two parties join together and make alliance before the elections. This type of alliance is called 'Pre-poll alliance'. Pre-poll or post-poll alliance helps political parties to join together to form the government when there is a hung parliament or assembly. Such a government formed with the co-operation of different political parties is called 'Coalition government'. The political parties of coalition government share power by joining council of ministers. At certain times they do not share power but support coalition government. This type of support is called 'outside support'. Since 1989 hung parliament or legislative assemblies have become common. Coalition governments have been formed many times both at the centre and some of the states.

Public opinion : Public opinion is a view expressed by common people on a particular issue that concerns them. It is not the opinion of majority or the politicians. The government formulates policies and makes laws based upon the public opinion. The public opinion changes from time to time based on issues. The public must be aware of the

issues and must be free to express their opinion without any fear or prejudice. The government and the political parties try to influence the public opinion. TV, Radio, News papers, Journals, Web site and such other media help in sharing the public opinion.

Media and Democracy : The day- today information about the happenings is provided by the media. It helps people to know about the plans and policies of the government. It provides information about the functions of the government. In turn, it helps the government to know about the views of the people on important issues. Media make representatives accountable and answerable to issues raised by the people. The media must provide truthful, fearless, unbiased views. The media on the other hand should not sensationalize the issues. It should present the issues in such a way that the principles of unity, secularism, democracy and harmony are not disturbed.

Print media includes news papers and periodicals. In India the news papers and periodicals must be registered with a body called the registrar of news papers. In order to improve the standards of news papers and to protect the freedom of press a body called Press Council of India is constituted.

There is electronic media which includes TV, Radio, Internet, etc. They help the people, officials and the leaders to interact with each other on several issues. They function in accordance with the Broadcasting Code of 1962.

The Right to Information : Right to Information Act was passed in India in 2005. The objective of this Act is to check corruption in public life, to bring about transparency in administration and make the government accountable to people. The Act empowers the people to get information from the government bodies by filing an application. The authorities are required to provide information sought, within 30 days. With regard to the cases related to life and liberty the information must be provided within 48 hours. However, the government may reject to provide information if it is concerned with security, sovereignty and integrity of the nation.

Exercises

I Fill up the blanks:

- 1 The word Democracy is derived from the word _____.
- 2 The party that commands majority in the legislature and looks after the administration is called _____ party.
- 3 The minimum age to vote in India is _____ years.
- 4 The elections conducted once in five years in a routine manner is termed as _____ elections.
- 5 The electronic machine used to register the votes is called _____.

II Answer the following questions briefly:

- 1 What are the advantages of democracy?
- 2 Mention the different types of Government.
- 3 How is direct democracy different from indirect democracy?
- 4 What is universal adult franchise?
- 5 List out the essential factors for the success of democracy
- 6 Why is efficient opposition party an essential factor in democracy?
- 7 Why are periodical elections necessary in democracy ?
- 8 Success of democracy depends on the voter. Justify.
- 9 Distinguish between regional and national parties.
- 10 How is the media helpful for the efficient administration of the Government ?
- 11 What are the objectives of Right to Information Act ?

III Suggested activities:

- 1 Discuss in groups the salient features of democracy, dictatorship and communist form of Government and decide which form of Government is best suited in the modern context.
- 2 'Good leadership contributes to the success of democracy'. Arrange a talk on the topic and discuss.
- 3 Prepare a pictorial chart with explanation about the election procedure in India.
- 4 Conduct a mock election procedure in your class with the help of your teacher.

IV Project works:

- 1 With the guidance of your teacher prepare a project report on the direct democracy practised in Switzerland.
- 2 Study and prepare a report about the election procedure followed in Lok Sabha and Panchayat elections.
- 3 Collect information and present it as to how the media has brought changes in policy making and administration of the Government.
- 4 Study and collect information about the factors like corruption, favouritism and greed for power that become responsible for the destabilization of Governments.
- 5 Collect information about the coalition Governments formed in India and the circumstances that led to the formation and failures of such Governments.
- 6 Invite the legislators of your area and discuss with them about the advantages of the party system.
- 7 Prepare a report on the role of public opinion against corruption in India in 2011.

CHAPTER-4

LOCAL SELF GOVERNMENT

After studying this chapter you:

- know the importance of forming local self government.
- explain the objectives and functions of local self government.
- describe the formation, administration, responsibilities and duties of local government.

The concept of local self government in India is very old. Many ancient kingdoms of India gave importance to the growth of local self government. Local self government provided a link between the government and the masses. It helped the people of the locality to voice their problems. The local government helped to solve local problems at the local level with the co-operation and involvement of the people. The involvement of people in administration strengthened the democratic institution at the grassroot level. The people were vested with powers of electing representatives to local administrative bodies. The self governing bodies called local self government became the basis for the decentralization of power. Acts of 1919 and 1935 passed by the British provided more powers to local self governing institutions in India. After independence the government of India appointed many committees and passed Acts to realize the dream Grama swarajya of our father of the Nation.

In addition a direction was included in Indian Constitution which states that the state shall take steps to organise village panchayat and provide them with adequate powers and authority to function efficiently. 73rd and 74th constitutional amendments which came into effect in 1993 became the milestone in the history of Panchayat Raj system.

The local self governments functioned in Karnataka in the pre – independence period. In the post independence period many committees were appointed by our state government to establish and strengthen local bodies in our state. In 1983 the Panchayat Raj Act was introduced and it came into effect in 1985. According this Act Zilla Panchayat at district level, Taluk Panchayat at taluk level and Grama Panchayat at village level were created through direct elections. Later in 1993 the Panchayat Raj Act was amended to strengthen the Act of 1983. The Act also made provision for the creation of Grama Sabhas. To keep pace with the modern developments many amendments to

Karnataka Panchayat Raj Act have been passed. The objectives of the local self government are :

- To involve the local people in solving the problems of their own locality.
- To provide the knowledge of administration to common people.
- To help in decentralizing powers and make the administration become more efficient.
- To train or develop leadership qualities among people at the grassroot level.

Functions of Local Self Governments: The functions of the local self governments like Grama Panchayats, Taluk Panchayats and Zilla Panchayats are varied. A few important functions are :

- To maintain and protect the panchayat property.
- To prepare the annual budget of the local body.
- To undertake health and family welfare programmes.
- To plan and undertake the developmental works like laying of roads, electrification, housing and supply of drinking water, etc.
- To encourage and implement the primary, secondary, adult and informal education programmes.
- To maintain cleanliness and sanitation of the area.
- To prevent all sorts of pollution and to provide better health facilities.
- To provide facilities for the distribution of essential commodities like food grains, kerosene etc.
- To ensure prompt registration and reporting of birth and deaths.
- To encourage agriculture, animal husbandry, khadi and handicraft industries.
- To undertake the programmes for conservation of soil, water and forest.
- To execute the agricultural extension programmes to help the farmers.
- To plan and implement the welfare schemes for the benefit of SC, ST, weaker sections, women and children.

- To provide marketing facilities, street lighting facilities and reading room facilities.
- To collect taxes, fees and penalties.
- To identify the beneficiaries for the various projects and welfare programmes of the government.

Sources of Income : The local self governing bodies require funds to implement various plans and projects. The main sources of income for local bodies are

- Amount collected through water cess, health cess, education cess, library and reading room cess.
- Amount collected through building tax, vacant land tax, taxes on business establishments, markets, entertainment houses and advertising bodies.
- Taxes collected from the tourist spots.
- Rental and lease amount collected on their properties.
- Financial grants from the state government.

Composition of local self governing bodies

Gram Sabhas : Grama Sabha is a village council. There is no election procedure to Grama Sabha. All the members of Grama or village aged 18 and above can take part in Grama Sabha meetings. The president of Grama Panchayat presides and the members of Grama Panchayat attend the meetings. Grama sabha must meet at least once in six months. Grama sabha discusses the problems of their village and also the welfare measures undertaken for the progress and development of the village. It recommends the names of the beneficiaries to various governmental schemes.



Gram Sabhas

Chart of Panchayat Raj in Karantaka

Zilla Panchayat (District Administration) Taluk Panchayat (176) Grama Panchayat (5659)

(30)

(176)

(5659)

Structure of Grama Panchayat (Karnataka)

Adhyaksha → } Elected by the members of Grama Panchayat.
 Upadhyaksha →
 Secretary → } Appointed by the Government.

Village 1 Village 2 Village 3 Village 4 Village 5 Village 6 Village 7 Village 8
 Representative WM WM WM WM WM WM WM

Members of these wards form Grama Sabha
 (Karnataka has – 5,659 Grama Panchayat)
 Villages with 5,000 to 7,000 population.
 Adjacent small villages join to form / create Grama Panchayat
 Every 400 residents – 1 ward member / representative

The term of Grama Panchayat is five years and the term begins from the date of the first meeting of Grama Panchayat.

Gramapanchayats: Gramapanchayats are formed on the basis of population. Village or group of villages with a population between 5,000 and 7,000 form Gramapanchayat. Regions of Uttar Kannada, Dakshina Kannada and Malnad regions form Gramapanchayat only with the population of 2,000. The members of the gramapanchayat are elected by the adult population of the Panchayat area. One representative for 400 voters is elected. Reservation is provided to schedule caste, schedule tribe, backward classes and women.

As per second amendment of Panchayat Raj Act of 2000, a panchayat member must have a toilet in his house. If he does not have, he must arrange to have one within one year of getting elected.

Gramapanchayat meetings must be held at least once in two months. Minimum one third of the members of the Panchayat must be present to take decisions. All the members of the Gramapanchayat together elect Adhyaksha and Upadhyaksha for a term of 30 months. Adhyaksha presides over the meetings of Gramapanchayat and in his absence Upadhyaksha manages the deliberations. Reservation policy is applicable to the posts of Adhyaksha and Upadhyaksha. Standing Committees are formed for the efficient administration of Gramapanchayats.

A full time official called Secretary is appointed to look after the executive work of the Gramapanchayat. Recently provision is made to appoint one Panchayat Development Officer (PDO) through Karnataka State Public Service Commission. (KPSC).

Taluk Panchayats: Panchayat Raj Act of 1993 provides an opportunity for the creation of Taluk Panchayat at Taluk level. Taluk Panchayat comprises of the members directly elected by the eligible voters. The number of members in the Taluk Panchayat is based on population of the taluk. There is one elected representative for every 10,000 voters. Reservation is provided to SC, ST, backward communities and women. Besides, one fifth of the presidents of Gramapanchayats serve as the members of Taluk Panchayat. The Presidents are chosen through lots (lottery system). They are nominated on rotation basis for a period of one year. The term of the Taluk Panchayat members is five years. They have the right to resign or can be removed by the Government. MLAs, MLCs and MPs of that jurisdiction can attend the Taluk Panchayat meetings.

The Taluk Panchayat meetings must be held at least once in two months. In case of utmost importance special meetings are conducted. The president of Taluk Panchayat presides over the meetings. In his absence vice president presides over the meetings. President and vice president are elected by the Taluk panchayat members for a term of 20 months. The standing committees are constituted to bring about efficiency in administration. The government appoints the executive officer to look after the executive work of Taluk Panchayat. In revenue matters his powers are equal to that of magistrates. Taluk Panchayats have certain functions to perform in addition to the functions of local bodies. They are,

- To consolidate the annual plan proposals of the Grama Panchayats and to submit those to Zilla Panchayat.
- To implement all the welfare programmes suggested or ordered by the Zilla Panchayat or state government.

Zilla Panchayat: Zilla Panchayats are constituted at district level to look after the administration. Earlier they were called district boards. The members of the Zilla Panchayat are directly elected by the people of the district. The total number of representatives vary from district to district based on the population. One representative for a population of 30,000 in Dakshina Kannada, one representative for a population of 18,000 in Kodagu (Coorg) and one representative for a population of 40,000 in other areas are elected. In addition the presidents of Taluk Panchayats, MLAs, MLCs and MPs of that district are the members of Zilla Panchayat. They can attend the meetings and vote. Reservation of seats are provided to SC, ST, backward classes and women. The term of the members is five years.

Zilla Panchayat meetings are to be held at least once in two months. One president and one vice president are elected for a term of 30 months. The President of Zilla Panchayat is called Zilla Adhyaksha. Zilla Adhyaksha presides over the meetings of Zilla Panchayat. In his absence vice president will presides over the meetings. The president has the powers to sanction one lakh rupees for relief measures during the period of calamities. Five standing committees are formed for efficient administration of Zilla Panchayat. Chief Executive Officer (CEO), equal to the rank of the District Commissioner is appointed by the State government to look after the executive work of the Zilla Panchayat. He takes part in Zilla Panchayat meetings and discussions, but has no right to vote.

Zilla Panchayat is like the district government. It has vast powers in the implementation of developmental programmes and welfare schemes in the district. All the developmental programmes and schemes of the government are routed through Zilla Panchayats. In addition it has the following functions :

- To create an atmosphere of mutual trust, confidence and co-operation between Grama Panchayats, Taluk Panchayats and Zilla Panchayat for successful implementation of government projects and programmes.
- To bring about co-ordination among all the departments for successful implementation of programmes and also to supervise such developmental work.
- To encourage and provide support for the establishment of co-operative societies, co-operative banks and such other co-operative institutions.
- To execute the work as directed by the state government.

A separate Election Commission is constituted at state level to conduct elections to local bodies as per Panchayat Raj Act 1993. The Election Commission so constituted conducts the elections to Grama Panchayats, Taluk Panchayats and Zilla Panchayats in Karnataka.

Urban Local Bodies

There are many towns and cities in the state. Towns and cities are categorised as urban areas. In urban areas people have better facilities of education, health, transport, drinking water, sanitation and entertainment. At the same time there are many problems in urban areas. In order to solve these problems and to provide good governance, the urban local self governments or urban local bodies are set up. There are three types in urban local bodies. They are :

- City Corporation (Mahanagara Palike) – Major cities
- Town Municipalities or Municipal Corporations – Towns and Cities
- Cantonment wards : under the control of Defence.

The state government has powers to declare a particular area as a city or a town on the basis of certain factors like population, income etc., These urban local bodies have many functions. They are :

- To prepare the budget and to get the approval of the council.
- To look after the overall administration of the town or city.
- To prepare a good town planning system and to implement it.
- To provide good roads, transportation, water supply, electricity, education, market and health facilities.
- To maintain cleanliness by providing good sewage system and disposal of urban waste.
- Granting permission to build structures, maintaining of local body buildings and properties.
- Registration of births and deaths.
- To provide parks, sports and entertainment facilities.
- To improve the living conditions in the slum areas by providing facilities.
- To establish orphanages, old age homes, beggar colonies, juvenile homes and child welfare centers.
- To undertake the construction of swimming pools, stadiums, museums, bus stations, reading room facilities, public libraries, veterinary hospitals, theatre for cultural programmes, wholesale market yards and crematoriums.
- To plan for rain harvesting.
- To encourage cultural activities.
- To undertake measures for the improvement or progress of backward classes and weaker sections.
- To encourage and to undertake such measures which can help to maintain greenery, cleanliness, and beauty of the town or the city.

Sources of Income

In order to bring about the development and progress of the area and also to implement various plans and projects, the urban local bodies require funds. The main sources of income are from the taxes levied and collected on buildings, vacant sites, shops and vending carts etc. In addition, they collect rent from the buildings of the local bodies rented out to offices, market yards, shops and town halls etc. Water cess, market cess and cess on entertainment houses yield revenue.

The grants provided by the state government help the local bodies to undertake welfare measures.

Composition of urban local bodies

Town Municipalities or Municipal Corporations: An urban area is classified as a town or a city on the basis of the population. An area with a population between 20,000 and 50,000 is considered as a town. Town municipality is the governing body of that area. Similarly an area with a population between 50,000 and 3 lakhs is considered as city. The governing body of that area is called a City Municipality. The governing bodies of Town Municipalities and City Municipalities have elected representatives called Councillors. The Councillors are directly elected by the people of that town or city. The number of councillors vary from place to place depending on the population of that area. In Town Municipality the number of councillors are between 23 and 27 whereas in City Municipalities the number is between 31 and 37. Beside, the State Government nominates five members who have good experience and knowledge in municipal administration. These nominated members take part in debates and discussions of the council meeting but have no right to vote. The local MLAs, MLCs and MPs can also attend the council meetings and vote. SC, ST, backward classes and women are provided reservation as per the rule in these local bodies. The President and the Vice President are the heads of the local bodies. They are elected by the councillors. The President presides over the council meetings and helps in smooth functioning of the local body. In the absence of the President, the Vice -President looks after the functions. The term of the urban local bodies is five years. Under certain special circumstances the State Government has powers to extend the term. Four standing committees are constituted for the smooth and efficient administration of the local bodies. The Chief Officer is the Administrative Officer of the municipal body. He is appointed by the Government. He looks after the entire executive work of municipality besides providing the necessary information to the council.

City Corporation or Mahanagara Palike

City Corporation or Mahanagara palikes are constituted as per Karnataka Municipal Corporation Act of 1976. The City Corporation or Mahanagara Palikes are formed in the areas with more than two lakh population and an income of more than Rs. One crore. The members of the City Corporations are called Corporators. The number of Corporators in the corporation is decided on the basis of the population. The number

of corporators should not generally be less than 30 and not more than 100. The state government decides the size of the corporation.

There are seven city corporations and one Bruhat Mahanagara Palike in Karnataka. They are, (1) Mysore, (2) Hubli-Dharwad, (3) Bellary, (4) Mangalore, (5) Belgaum, (6) Gulburga, (7) Davanagere. Bangalore City Corporation is called Bruhat Bangalore Mahanagara Palike (BBMP). There are 198 corporators in this BBMP.

City is divided into smaller electoral divisions called wards. One corporator is elected from each ward. Corporators are directly elected by the people of that city. Certain seats are reserved to SC, ST, backward classes and women. Besides these elected members, the state government nominates five members possessing good experience and knowledge in town planning, health, education and Municipal Administration. The five nominated members can take part in corporation council meetings but have no right to vote. The MLAs, MLCs and MPs representing that area can also attend the meetings of the corporation council and vote. The term of the corporators is five years and the term can be extended upto one year by the state government depending upon the circumstances.

The Mayor and Deputy Mayor are the leaders of the corporation. They are elected by the corporators. Their term of office is one year. The Mayor Presides over the corporation meetings. He/She takes measures to implement the decisions of the council meetings. He/She establishes control over the executive work of the corporation. Standing Committees are set up to bring about efficiency in administration and also to assist the Mayor.

Karnataka Municipal Corporation Amendment Act is passed in 2011. The Act applies to eight corporations of Karnataka including that of Bangalore. The Act provides opportunity for community participation in Municipal functions. According to this Act each corporation will have two more representative bodies namely the area sabhas and the ward committees. These two committees involve in the developmental schemes of the corporation.

The Commissioner is the real executive of the City Corporation. Generally he is of IAS (Indian Administrative Services) cadre. He is appointed by the State Government for a term of three years. He participates in the council meetings and provides the required information to the council. He implements the decisions of the council. He assists the Mayor in preparing the budget and also in the executive functions of the corporation.

Exercises

I Fill in the blanks:

- 1 The Karnataka Panchayat Raj Act that is in force now was passed in the year _____ .
- 2 The body of the village council in which all the voters of the village can participate is _____ .
- 3 The President of Grama Panchayats are chosen to Taluk Panchayats on the basis of _____ system.
- 4 The officer appointed by the Government to look after the day to day executive work of Zilla Panchayat is called _____ .
- 5 The total number of City Corporations in Karnataka including Bangalore is _____ .

II Answer the following questions briefly:

- 1 What are the objectives of Local Self Government?
- 2 How is the local body of your area formed?
- 3 Mention the functions of your local body.
- 4 What are the sources of income of your local body?
- 5 List out the members who have right to vote and those who have no right to vote in the local bodies.
- 6 Mention the need for constituting standing committees in local bodies.
- 7 List out the group of members who have been provided reservation in the local bodies.
- 8 What should be the population to classify an area as town or city.
9. What are three tiers of Panchayat Raj in Karnataka ?

III Suggested activities :

- 1 Invite the head or a member of the local body of your area to the school and discuss the problems of your area and also the programmes undertaken to solve such problems.
- 2 Supposing you are a member of local body of your area, what measures would you undertake to solve the problems of your area.
- 3 Conduct a mock local body meeting in your class room with the help of your teacher.
- 4 Discuss the need for providing reservation in local bodies.

IV Project works :

- 1 Study and collect information about the local bodies which functioned in ancient India.
- 2 Survey the area in which you live and collect the information about the problems of the area that needs to be attended.
- 3 Survey the area in which you live and prepare a report about the facilities provided by the Government and how the people of the area are benefited by these facilities.
- 4 Interview any five or six members of the local bodies and collect information about the measures taken by them to improve their wards and prepare a report.

SOCIOLOGY

CHAPTER-1

MAN AND SOCIETY

After studying this chapter you:

- justify that 'man is a social animal'.
- understand socialization and human expressions through such process.
- identify the early sociologists.

Among all the living beings on earth, it is only human beings who have complete awareness about their existence. They contemplate over their goals and purposes in life. It is due to this that innumerable questions arise in people's minds. Why is man called a social being? Is man God's creation? Why are there differences between groups? What is that strength which unites people and groups? Why does society undergo constant change? Is this change a sign of progress? In order to find answers to such questions, and to study human society in a methodical manner, many attempts were made in a scientific manner in the past.

As a result of all these attempts, a new branch of study originated. This study was called sociology. In order to carry out a scientific study of human society, we will have to understand the differences between animal society and human society.

Man differs from all other animals. He is civilized and is different from other animals. He is creative. There are many reasons for this. One of them is the structure of his fingers, especially his thumb. We realize the significance of the thumb when we write. Though animals too have fingers, these fingers are not of much use to them. The second reason is his upright posture. This is very helpful in tackling any danger. Thirdly, it is man's teeth. They enable his consumption of food and are, indirectly, the cause for his physical and mental development. The fourth, and the most important reason is man's brain. It is due to the development of this brain, its perceptions and creativity that the civilized society which we see today has been created. But animal's lives are limited to indulgence in food, fear and pleasure.

Man is a Social Being

The relationship between man and society is unique. There is no society without man, nor man without society. That is the reason many

sociologists are of the opinion that man is the creation of society, and society, that of man. If we close our eyes and ask ourselves, "Would it be possible for me to live all alone in my town?" everyone would come up with the same answer. And that is, impossible. Isn't that so? Man is a social animal. He desires to live with others around him. Society is necessary for the development of all of us, because social relationships are necessary for man's existence. That is the reason human society has been called a web of social relationships, and man, a social being.

Socialization

If we have to become members of society, we have to live amidst society. If we do not live among people, we will not be able to learn language, study, play games, experience thought processes or the body language that we have learnt now. This process of learning is called socialization. The family, school, peer groups, mass communication etc., enable our socialization. The family provides us food, nurturance, education and security. Parents help us to grow mentally and physically healthy.

The school provides formal education. We learn to co-operate and live with others interacting with our peer groups. The mass media give us knowledge about the world around us and enable us to live in harmony with it. Due to all this help from various quarters, man is able to lead a successful life in society.

The Necessity of the Social Environment

If man does not grow in a social environment, he cannot imbibe the qualities of a human being. An individual cannot be socialized outside the society and group. In order to understand the truth of this statement, the following instance can be studied:

Kamala, a girl who was found in Midnapore in 1920, had spent nine years among the animals in the forest. She used to walk on all fours legs like an animal and eat raw flesh. Later, in the company of human beings, she learnt to eat cooked food, to speak and behave like other children. But she was not aware her own nature. What is evident from this instance is that man, if he is not in human society, becomes an animal. This has been proved by many other experiments by social scientists.

Human Beings and Language

How do we express our feelings? We can express hunger, thirst, sleepiness, sorrow and happiness through our bodily gestures and signals. But we cannot convey all our feelings only through body language. Language becomes inevitable in such situations.

Our languages have words such as father, mother, brother, sister, uncle, aunt etc., including relations between human beings. Thus language is needed to understand specific relationships and feelings perfectly.

Man knows language, whereas animals do not. This is the difference between man and animals. Just imagine how the world would be without language. There would be no textbooks, schools, mass media or civilization! Human society would be just like animal society. Therefore, while studying society, language is treated as a very important aspect of the society.

Early Sociologists

Let us know about the sociologists who developed sociology in the early stages. Sociologists are those who study the society, culture, behaviour, social relationships, etc. Some of the early sociologists are as below:



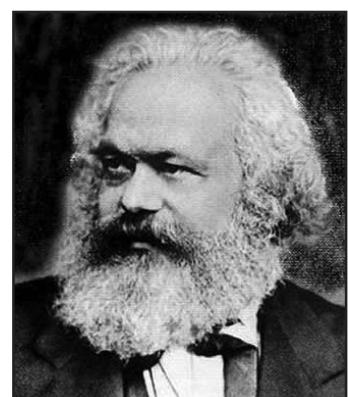
August Comte

Auguste Comte was the one who gave the name Sociology to the scientific study of society. Hence he is considered the Father of Sociology. Herbert Spencer was the British sociologist who lived in the 19th century. He studied the evolution of society.

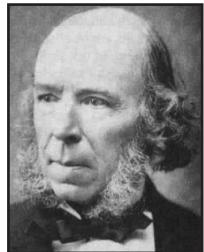
Emile Durkheim, the French sociologist, lived in the latter part of the 19th century and the early part of the 20th century. He worked hard at making sociology a science. Max Weber was a German sociologist. He was also a great scholar in the fields of Economics, Philosophy and History. He did a sociological study of the Labour force and the Christian religion.

Karl Marx was a German philosopher. He was highly knowledgeable about History, Economics, Philosophy and Christian Religion. He extended the scope of sociology.

The British introduced Sociology in the Bombay University in 1914. Leading Indian sociologists have been G.S. Ghurye, M.N. Srinivas, A.R. Desai, Iravati Karve, S.C. Dubey and others.



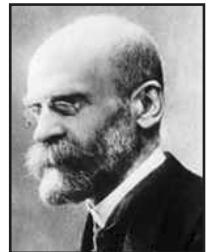
Karl Marx



Herbert Spencer



Max Weber



Emile Durkheim

Exercises

I Fill in the blanks with suitable words:

- 1 Man is a _____ animal.
- 2 Formal education is provided by the _____.
- 3 The Father of Sociology is _____.
- 4 Man to become a human being _____ is necessary.
- 5 Human beings express their feelings through _____.

II Answer the following questions in 2/3 sentence each:

- 1 How is man a social being?
- 2 What is socialisation?
- 3 Describe Kamala, the one who was found in Midnapura.
- 4 Name some early sociologists.

III Answer the following questions in 4/5 sentences each:

- 1 Explain 'Man is a social being'.
- 2 Explain the relationship between human beings and language.
- 3 What are the differences between human society and animal society?
- 4 What does Sociology deal with?

IV Activity

Collect the pictures of Sociologists.

CHAPTER-2

MAN AND CULTURE

After studying this chapter you:

- know the concept of culture and its development.
- analyse cultural variety and tradition.

In our daily conversations, the word 'culture' is generally used to refer to good behaviour, customs, traditions and rituals. Let us see how this word is used in sociology.

The word culture is derived from Latin word 'colere', that means cultivate. Various sociologists have defined this word in different ways. Culture is that complex system involving knowledge, the arts, morality, law, customs, abilities and talents that we learn being members of society. In short, whatever we are, that is our culture.

Culture is shaped by the geographical features, traditions and needs of that particular society. That is the reason we cannot call one culture good and another culture bad. Culture is transmitted from one generation to another. The language we have learnt has been passed on to us by our elders. Culture is subject to change constantly. As you might have observed, the style of dressing, hairstyles, food habits have changed a lot over the past ten years. Thus the culture of one society differs from that of another society.

Cultural Diversity

Let us imagine that we are walking along a famous street in Bangalore, the capital city of Karnataka. We will get to see people dressed in various kinds of clothes, people belonging to different races and people conversing in different languages.

There cannot be the same kind of culture in any society. There will be different cultures depending on the religions and life styles followed by the people. We call this pluralistic culture.

Even when cultures vary, they can influence one another deeply. For instance, the chudidar worn by women is a kind of dress which has come from the Moghuls to us. In the same manner, the trousers and shirts that we wear, the English language that we speak have come to us from the British. In India we get to see a pluralistic culture consisting of hundreds of tribes, thousands of castes, many races and hundreds of languages. That is the reason why India is said to have unity in diversity.

Customs and Traditions

Now that we have understood what culture is and how diverse it can be. Let us know what constitutes culture. Culture is made up of beliefs, values, rules, social conventions and morals. These can collectively be called customs and traditions.

Freedom, true friendship, cleanliness, humility, patriotism etc. are values. Values can be understood as the behaviour expected of human beings by society. Values enable us to determine what is good and bad in every culture.

There are conventions and moral codes to complement rules. Conventions are the activities we engage in again and again in our daily lives. We engage in eating, sleeping, greeting and other similar activities according to the prevailing conventions without giving much thought to them. These activities are inseparable parts of culture. For example, you do not ask your teacher everyday how you have to sit down to eat or sit in the class. You will have learnt all of them just through practice of conventions. Conventions enable us to do our daily duties without any hesitation.

Exercises

I Fill in the blanks with suitable words:

- 1 Culture means _____.
- 2 Conventions are activities _____.
- 3 We get to see unity _____ in India.

II Answer the following in a sentence each:

- 1 What is culture?
- 2 Give examples of the cultural diversity in your environment.
- 3 What are customs and traditions?
- 4 Give examples for customs and traditions.

III Answer the following in four-five sentences each:

- 1 Give an example of a convention.
- 2 Explain cultural diversity.
- 3 Describe the various aspects of culture.

IV Activity:

Describe a fair where you are living and discuss with your elders.

CHAPTER-3

SOCIOLOGY IN DAILY LIFE

After studying this chapter you:

- understand the importance of social interaction and daily life.
- understand the role of consciousness.
- know the importance of body language and conversation in social interaction.

Daily Life

While referring to women, some people may remark that they are not very knowledgeable. This remark reveals their understanding that women are weaker than men and they are to be neglected. But such remarks are just casual talk full of prejudices against women and are not scientific truths. When it concerns knowledge, there is no difference between men and women.

The above example illustrates the fact that though general knowledge is helpful to us in our daily lives, it does not provide us answers to certain important questions. In such situations, sociology is of great help to us. It is possible for sociologists to carry out a study of women, and scientifically prove that they are also as strong and as capable as men. The above explanation prove that sociology provides us with the right information needed for our daily lives. It enables us to study all subjects without any prejudices.

The Individual Body Language And Conversation

We interact with many people in our daily lives. This process is called social interaction. Social interaction involves more than two people communicating among themselves through language and symbols, and influencing one another's behaviour and thoughts.

We cannot lead our daily lives without communication. The language that we speak depends on the area we reside in. We learn the language that is suitable for our environment, or else it will be difficult to lead our lives. Sometimes we use a different kind of communication to satisfy our needs. If we do not know language, we cannot converse with anyone. On such occasions, we express our feelings through body language or facial expressions.

Role Consciousness

You might have noticed doctors and nurses when you visited a hospital. After examining the patient, the doctor suggests necessary medicines and treatment. The nurse gives the medicine to the patient and looks after him according to the instructions of the doctor. In the same manner, as the teacher enters the classroom, he may ask you various questions. Through those questions, he tests whether you have studied at home or not. You also ask questions about the topics you have not understood and get clarifications.

However, you do not go to the hospital and ask questions about your school lessons. Or put questions about your illness to your teacher and ask for medicines. Why do you do so? That is because we expect the doctor to do his duty towards health, the teacher to teach lessons and the nurse to treat us. We do not get confused about these duties. This performance by every person of his role is known as role consciousness. Even in our family, we perform many roles as brother, sister, father, mother, grandfather, grandmother, etc. Every individual adopts many roles according to his age and conditions.

Exercises

I Fill in the blanks:

- 1 We express our feelings through _____.
- 2 Sociology enables us to study every subject without any _____.
- 3 Social interaction is _____.

II Answer the following questions:

- 1 How does sociology enable us to understand the society in our daily lives?
- 2 Give an example to illustrate the importance of language.
- 3 What is role-consciousness?

III Answer the following in four-five sentences each:

- 1 Describe the relationship between language and society.
- 2 Explain role consciousness with an example.

IV Activity :

Write an essay on your role in society as brother/sister.

CHAPTER-4

KINDS OF SOCIETIES

After studying this chapter you:

- make a list the different types of society.
- understand the features of different types of societies.

We do not get to see the same kind of society everywhere. Various aspects like lifestyles, culture, customs and traditions, professions etc., differ from place to place. We can see even now many people of the cowherd-community making a living by hunting and gathering roots and tubers. Similarly, when we go to rural areas, we can see innumerable sheep, cattle, other pet animals, and also green fields stretching as far as the eye can see. We can also notice clusters of houses, isolated houses, farmers carrying ploughs, women carrying water in pots from wells.

In cities like Bangalore, Hubli, Mumbai and Delhi we see roads teeming with traffic, noisy crowds, vast suburbs and slums. We can also come across people wearing different kinds of clothes, factories spewing smoke, tall buildings, universities and huge hospitals.

This means that society is not the same everywhere. It is of different forms in different places. Hence we classify societies into different kinds. These are:

- 1 hunting and food-gathering society
- 2 cattle-rearing society
- 3 farming society
- 4 industrial society

Hunting and Food-Gathering Society

This is the simplest and the oldest of all forms of human societies. This society is very small, comprising very few people, and adopts a nomadic life style. The weapons they use are – axe made from stone, spear, dagger etc. These people hunt wild animals for their survival. They also gather fruits, seeds, roots, tubers and vegetables grown wildly in the forest. They do not have any desire to earn money. They lead lives sharing everything with others.

Features of this society

- 1 This society comprises very small and scattered groups of people. It never has more than 40-50 people.
- 2 Since this society keeps on moving from place to place, the people have to move to a new place in search of food when it is scarce in one place.
- 3 People in this society do not desire to earn wealth. There is no concept of wealth in their society. Whatever they get, they share it with one another.
- 4 The whole society is bound together by means of relationships. There is no personal identity. Family and relationships are the only mutually related institutions.
- 5 Since there are no political institutions, there are no categories of the rulers and the ruled here.

Cattle-Rearing Society

The society which rears herds of cattle for its livelihood is a cattle-rearing society. Here the people satisfy their needs by hunting, cattle-rearing, food-gathering. Even today we can see cattle-rearing societies in parts of Africa and Central Asia.

Features of this society

- 1 These societies are comparatively big and consist of several hundreds to thousands of people. For example: The Bhaktiyari community has about 5000 to 1,50,000 people.
- 2 These societies can be usually seen on grasslands, hilly regions, deserts and areas not suitable for agriculture. These are the areas congenial for cattle-rearing. That is the reason their main occupation is cattle-rearing.
- 3 In this society, the one who possesses the largest number of cattle becomes more powerful than the others. He is considered rich and becomes the leader of the group. As rich families go on progressing,

they lead to the birth of leadership in society. This leads to inequality in society.

Farming society

A farming society depends on cultivation of vast areas of land for the livelihood. People make use of animals to plough the land.

Features of this society

- 1 A 'Farming Revolution' began with the invention of the plough around 3000 B.C. With this, the production of food too increased. Food production increased much more when animals were used to draw the plough.
- 2 Cultivation is the main occupation in the farming society. Hence people stayed in the same place. With this permanent settlement of people, villages took shape.
- 3 Since increased food production was possible in the fields, it was not necessary for everyone to work there throughout the day. Therefore, majority of the people engaged themselves in other activities. As a result, cities evolved, and their population too increased significantly.

Industrial Society

The society which depends on industries that manufacture products with the use of science and technology is called an industrial society.

Features of this society

- 1 New inventions transformed the society totally. The steam engine, internal combustion engine, electric energy, nuclear energy and others have brought about and are bringing wide-ranging social and economic transformation.
- 2 Many people migrate to cities where industries are established. Therefore, the population in cities increases.
- 3 Division of labour is needed to run industries. Division of labour involves division of the work according to the skills of the workers. In the industrial society, we see division of labour in all aspects.

Exercises

I Fill in the blanks with suitable words:

- 1 The members of the hunting society used _____ weapons.
- 2 In farming _____ is used for ploughing.
- 3 Division of tasks according to skills is called _____.

II Answer the following questions:

- 1 What is meant by 'Cattle-rearing' society?
- 2 What do you mean by 'Farming society'?
- 3 What is meant by 'Industrial society'?
- 4 What are the kinds of societies?

III Answer the following in four-five sentences each:

- 1 Describe the life style in the hunting and food-gathering society.
- 2 Mention the features of the cattle-rearing society.
- 3 Explain the features of the farming society.
- 4 Describe the features of the industrial society.

IV Activity:

1. Compare and contrast the lifestyle of urban & rural people area with help of teacher.
2. Sit in groups, discuss the concept of an ideal society.

GEOGRAPHY

CHAPTER-I

THE EARTH-OUR LIVING PLANET

After studying this chapter you would know :

- other names of the Earth.
- the size of the Earth and distribution of water on it.
- to recognise the continents and oceans of the world.
- about latitudes and longitudes, time, local time standard time and international date line.
- to mark (locate) the oceans and continents on the world map.

Do you know where we are living?

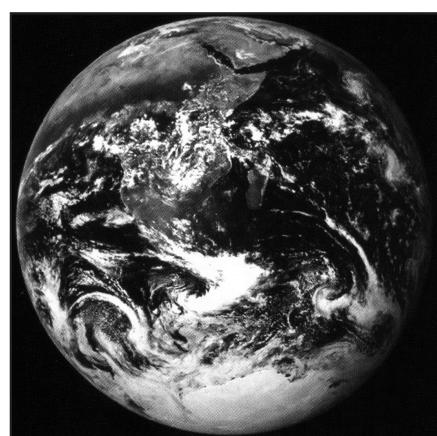
We are living on the Earth. It is the third planet from the Sun. The Earth is the home for all forms of life like plants, animals and human beings because of its suitable distance from the Sun, range of temperature, life supporting gases, atmosphere, water cycle etc. Our Earth is called by many names. Some of them 'Living Planet', 'Unique Planet', 'Watery Planet', 'Blue Planet'.

Size of the Earth: Distribution of Land and water bodies

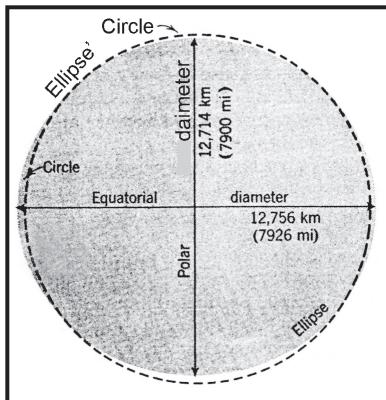
The Earth is the fifth largest planet in the Sun's family. The diameter of the Earth is approximately 4 times greater than the Moon and it is around 107 times less than that of the Sun.

The total geographical area of the Earth is 510 million sq kms of which 361 million sq kms (70.78%) is covered by water and 149 million sq kms (29.22%) is covered by land. Thus the Earth has unequal distribution of land and water. The ratio between the land and the water bodies is 1: 2.43.

The Earth's shape is often described as Geoid, which literally means 'Earth shaped', or 'Oblate spheroid'. The Earth is flattened at the poles and bulges at the equator. The Equatorial diameter of the Earth is



Earth



Shape of the Earth

12756 kms and the Polar diameter is 12714 kms. Equatorial circumference - 40,076 kms and Polar circumference - 40,008 kms. The difference of 42 kms in diameter is the proof for regarding the Geoid shape of the Earth.

The land bodies of the Earth are known as Continents. There are seven continents, namely Asia, Africa, North America, South America, Antarctica, Europe and Australia. The continents are land masses of large size. Asia is the largest continent in the world while Australia is the smallest continent.

The large water bodies on the Earth are called oceans. There are four major oceans. They are the Pacific ocean, the Atlantic ocean, the Indian ocean and the Arctic ocean. The Pacific is the largest and deepest ocean while the Arctic is the smallest and shallowest ocean.

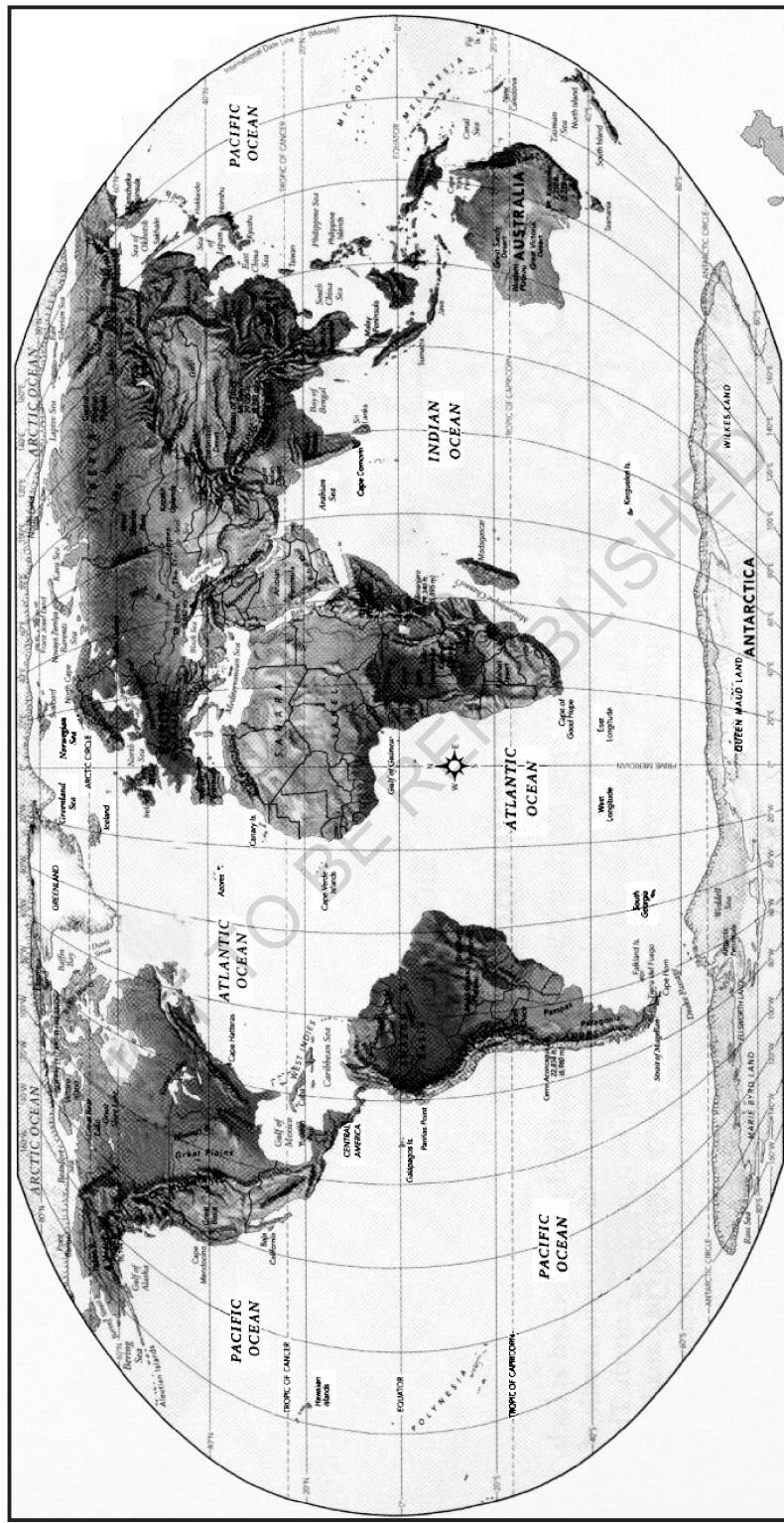
The land and water bodies are unevenly distributed between the Northern and the Southern hemispheres. The Northern Hemisphere has 60% of land and 40% of water. Therefore it is called the 'Land Hemisphere'. On the other hand there is 81% of water and 19% of land in the Southern Hemisphere and so it is called the 'Water Hemisphere'.

Latitudes and longitudes

How do we understand the location of a place, direction and distance between places?

The Earth is spherical in shape. Therefore it is difficult to locate the places, the direction and calculate distance between places. In order to understand the relations between different places on the Earth and their exact location, we have to understand their position, their distance from any fixed point and also their exact direction. To know the position, distance and direction east and west or north and south, a network of lines are drawn on the globe. These are known as lines of latitudes and longitudes. The horizontal lines are the lines of latitudes and the vertical ones are the lines of longitudes. These lines intersect each other at right angles and create a network called grid or graticule.

LATITUDES : Latitude is an imaginary line which joins all the places which have the same angular distance north or south of the equator. It is measured in degrees. The Equator (0°) is the longest line of latitude

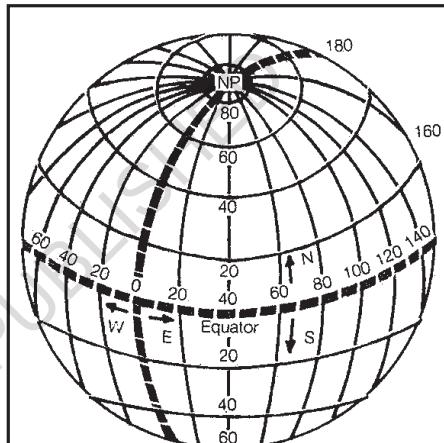


World Physical

known as the Great circle. It is equal to the circumference of the Earth. Other lines of latitudes are of shorter length. The length of lines of latitude decreases with the distance from the equator. All lines of latitudes are circles and parallel to the Equator. Therefore, lines of latitude are called parallels of latitude. There are 90° of latitudes on each side of the equator - 90° of North and South are points. Including equator totally there are 181 latitudes on the globe. The ground distance between two degrees of latitudes is 110.4 kms.

Important latitudes

1. 0° latitude-Equator or Great Circle.
2. $23\frac{1}{2}^{\circ}$ North latitude - Tropic of Cancer.
3. $23\frac{1}{2}^{\circ}$ South latitude - Tropic of Capricorn
4. $66\frac{1}{2}^{\circ}$ North latitude – Arctic Circle.
5. $66\frac{1}{2}^{\circ}$ South latitude – Antarctic Circle.
6. 90° North – North pole.
7. 90° South - South pole



PARALLELS OF LATITUDE AND MERIDIANS OF LONGITUDE

LONGITUDES : The imaginary lines that intersect equator at right angle joining the north and south are called longitudes.

On the globe, longitudes are shown as a series of semi-circles that run from pole to pole passing through the equator. All lines of longitude are of equal length. Lines of longitude are called Meridians ('meri'-mid and 'dian'-day) because all places along the same meridian of longitude experience noon or mid-day at the same time.

The meridian passing through Greenwich (England) has been chosen as Prime Meridian. It is marked as 0° longitude. There are 180 of longitudes to the east of Greenwich and 180 to the west. Thus there are 360 of longitudes. The zone between the Prime Meridian and 180 E longitude is called the Eastern Hemisphere. The opposite zone is called the Western Hemisphere.

The distance between two consecutive longitudes decrease gradually with distance from the equator. This is because the meridians of longitude converge at two poles. On the equator the distance between two consecutive meridians is 111 kms.

Longitude and Time : There is a definite relation between longitude and time. The earth is rotating on its axis and completes one rotation in 24 hours. This means 360 longitudes are covered in a period of 24 hours. This gives rise to a time difference of 4 minutes for every one degree of longitude, 60 minutes or one hour for every 15 degrees of longitude ($360 \times 4 = 1440 / 60 = 24$ hours). The time difference is to be added (E.G.A- East-Gain-Add) in case of places to the east of G.M.T and in case of places to the west the time difference is to be subtracted (W.L.S- West-Lose-Subtract).

Local time : The time according to the longitude of a place or according to the position of Sun at that place is known as the Local time. This is based on the local meridian passing over that place. When the Sun is shining vertically over the longitude it is 12 noon at that place. All places situated on the same meridian have the same local time. Every longitude has its own local time.

Standard time : As the local time varies from place to place, it would create considerable confusion if each place were to follow its own local time. In order to avoid confusion many countries follow uniform time throughout the country. Such uniform time is based on the central meridian of the country or the meridian on which the most important city is located. This uniform time which is followed throughout a country is called Standard Time of that country.

In India, $82\frac{1}{2}^{\circ}$ East longitude is considered as the Standard Meridian of the country. It passes through Allahabad of Uttar Pradesh. The time based on this Meridian is called the Indian Standard Time (IST). It is 5 hours and 30 minutes ahead of G.M.T.

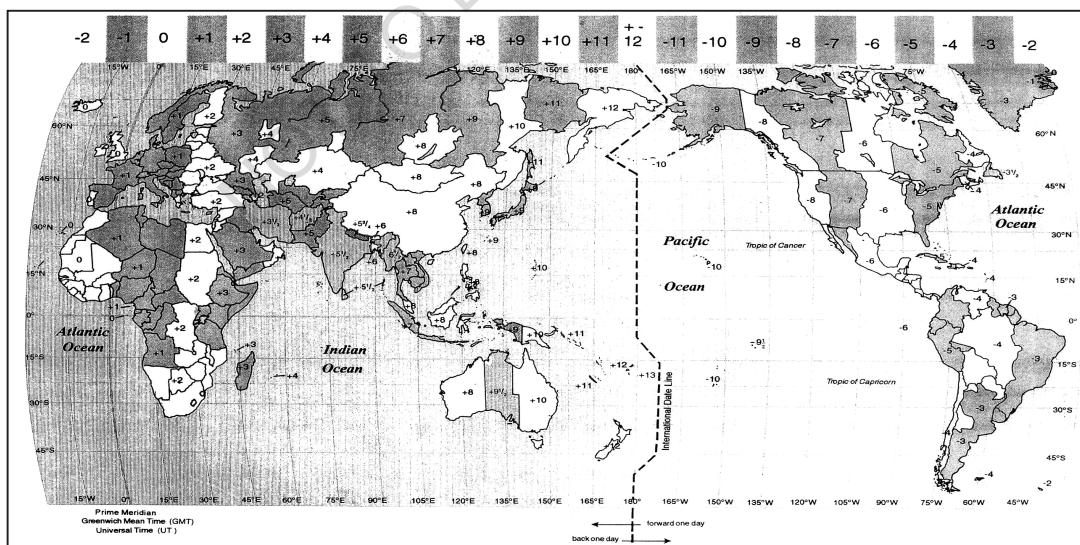
Time Zones : In certain countries of the World, where the longitudinal extent is so large (more than 45° of longitude) that there is often a difference of three to four hours between one part and the other, the land surface is divided into Time Zones. The whole globe is divided

into 24 such time zones so that the time in each zone differs from the other by only one hour.

Large countries like Russia, USA, Canada and Australia have vast longitudinal extent. Therefore they have different time zones. Russia has 11 time zones, USA and Canada have 5 time zones and Australia has 3 time zones.

International Date Line (IDL) : The problem of time in countries of the world was solved first by the standard time and then by the zonal time. But the circumnavigation of the world brought a new problem in keeping the correct date and day in the week for the travellers. Therefore a line passing through 180° meridian diametrically opposite to the G.M.T was adopted as the point where circumnavigators should make adjustments. This line is supposed to pass Pacific ocean along the 180° meridian but makes short detours in order to avoid land masses. This is known as the International Date Line because the date and day is changed whenever people cross this line by ships or aeroplanes.

Any ship crossing this line from west (Asia to North America) to east takes a day twice while the ship crossing this line from east (North America to Asia) to west drops one day.



Time Zones and International Date Line

Exercises

I Fill in the blanks with suitable answer:

- 1 The total geographical area of the Earth is _____ Sq. Kms.
- 2 The shape of the Earth is _____ .
- 3 The equatorial and polar diameters of the Earth is _____ and _____ Kms.
- 4 The $23\frac{1}{2}^{\circ}$ North latitude is called as _____ .
- 5 The Indian Standard Time is based on _____ longitude.

II Answer the following questions briefly:

- 1 Why is the Earth called 'Living Planet'?
- 2 Why are the Northern and Southern hemispheres called Land and Water Hemispheres?
- 3 What are latitudes and longitudes?
- 4 Mention the difference between local time and standard time.
- 5 What is the International Date Line?

III Define the following:

1. Unique planet	4. Continents
2. Size of the Earth	5. Prime Meridian
3. Geoid	6. Indian Standard Time

IV Terms to Remember :

1. Living Planet	4. Antarctic circle
2. Equator	5. Zonal Time
3. Arctic circle	6. International date line

V Activity :

List out the countries of the Eastern hemisphere and Western hemisphere on the basis of longitudes.

CHAPTER - 2

LITHOSPHERE

After studying this chapter you would know :

- the meaning of lithosphere and its importance.
- the structure of the earth and its composition.
- structure of rocks.
- about the internal forces-volcanoes, earthquakes, tsunami etc., and their effects on life on the earth.
- the external forces like temperature, wind, rain and rivers.
- the meaning of underground water and its importance.

Meaning and importance

The outer-most solid layer of the earth is known as the 'Lithosphere' (Litho means 'rock'). This layer is very thick in the continents and quite thin under the sea floor. The lithosphere consists of rocks, minerals, soils etc. Life exists on this layer with the help of the atmosphere and the hydrosphere. Continents are parts of the lithosphere where different land forms like mountains, plateaus, plains, etc., are found.

Earth's Interior and Composition

Do you know, what is there inside the Earth?

Our planet Earth is more than 4.6 billion years old and still in the process of changing. Man is in quest of understanding this change and eager to know more about inside the earth. What is inside the earth is still a mystery for man. With years of study and research human beings have been able to get information about the materials inside the earth up to 10 to 12 kms. Going beyond this depth is very difficult due to the increase of temperature (1° C for every 32 meters).

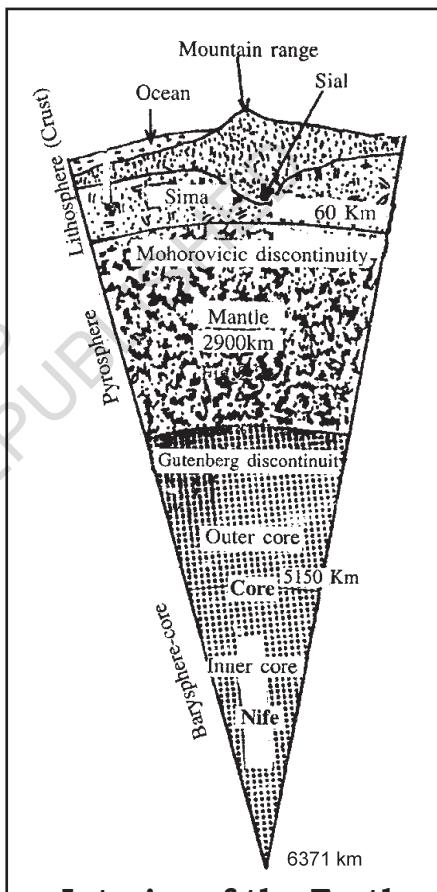
To understand more about the earth's interior humans are dependent on indirect evidences such as seismic waves, volcanic materials etc. The earth's interior comprises of various materials in different forms. On the basis of density of material, chemical composition and physical state of matter the earth's interior is classified into 3 main layers. They are the Crust, the Mantle and the Core.

The Crust: The crust is the uppermost layer of the earth, rich in Silica, Aluminium and Magnesium. The depth of this layer is around 60 kms from the surface. In the upper part of the crust only lighter materials are found. It is called **SIAL** (Silica and Aluminium) or continental crust.

The lower part of the crust is rich in Silica and Magnesium and it is called **SIMA** or oceanic crust.

The Mantle: The Mantle is the second and the middle layer of the earth. The depth of this layer is up to 2900 kms from the surface. The materials are in semi liquid or partially molten state which is called magma. The mantle is composed of dense and rigid rocks which have predominance of minerals like magnesium and iron. The mantle has two parts a) Upper mantle or the Asthenosphere is partially in a molten condition and b) Lower mantle or the Mesosphere in solid condition. The contact zone of the crust and the mantle is called 'Mohorovicic Discontinuity' or Moho. While the boundary that separates the Mantle from the Core is called 'Gutenberg Discontinuity'. Here the rocks are different in chemical composition from those below and above.

The Core: This is the innermost layer of the earth. The depth of this layer is up to 6371 kms from the surface. The most important materials of the core are Nickel and Ferrous (Iron). So it is known as NIFE. The core is divided into two sub layers a) The outer core is known as molten core, where the materials are in liquid and in molten form. b) The inner core known as solid core.



Facts File

Some deepest land mines in the world

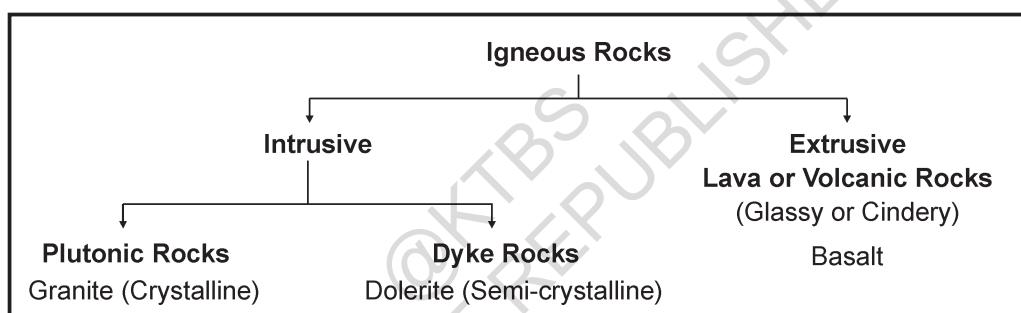
1. The Akola peninsula of Russia is around 12 kms.
2. The Kimberly diamond mine in South Africa is around 3.9 kms
3. The Gold mine at KGF in India is around 1.5 kms.

ROCKS

Rocks are the solid inorganic substances that are found in the crust of the earth. They are aggregates of minerals. Rocks are formed due to various natural processes. On the basis of mode of formation, rocks are classified into three types. They are **(1) Igneous rocks, (2) Sedimentary rocks and (3) Metamorphic rocks.**

1. Igneous Rocks : The word 'Igneous' means 'fire' derived from the Latin word 'Ignis' or Sanskrit word 'Agni'. Igneous rocks are those which have been formed by the cooling of molten matter of the earth. Igneous rocks were the first to be formed, therefore they are also called Primary rocks.

The two important types of igneous rocks are :

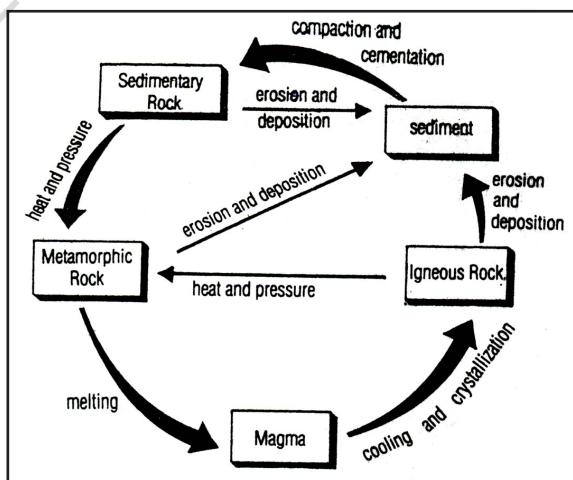


(i) Intrusive igneous rocks :

When the molten materials (magma) of the Earth's interior do not reach the earth's surface, they cool and solidify (quite slowly) below the surface and called intrusive igneous rocks. These rocks are made of large crystals and are found at great depth inside the Earth e.g., Granite, Diorite and Gabbro.

(ii) Extrusive igneous rocks:

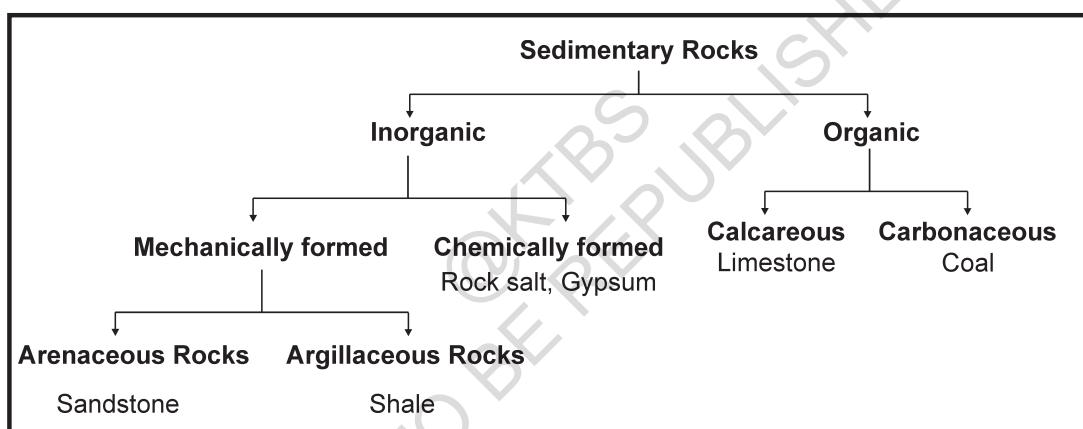
Rocks formed by solidification of magma above the earth's surface are known as extrusive igneous rocks. These rocks are generally fine grained or glassy because lava after reaching the surface of the earth cools and solidifies quickly e.g., Basalt and Andesite.



Cycle of Rock

The rock materials in the liquid or molten state is called 'magma' and when it comes out from the earth is called 'lava'.

2. Sedimentary Rocks : The word Sedimentary is derived from a Latin word 'Sedimentum', which means 'settling down'. Sedimentary rocks are formed by the agency of water, wind and ice. These agents break and erode the igneous rocks, transport those broken fragments and deposit them at certain places. The deposit of these materials often occurs in the form of layers or strata. Therefore sedimentary rocks are called stratified rocks. The sedimentary rocks are formed after the disintegration of igneous rocks. Therefore they are called secondary rocks. These rocks are also called aqueous rocks because they are formed in the water bodies (Lake, Sea and Ocean beds).



Mechanically formed sedimentary rocks: Rocks built up by fragments of pre-existing rocks which have been produced by the processes of weathering and erosion eg., Sandstone (Arenaceous rocks) and Shale (Argillaceous rocks).

Chemically formed sedimentary rocks: Chemical sediments are commonly formed by the process of evaporation of water containing salts in solution eg., Rock salt, Gypsum etc.

Organically formed sedimentary rocks: Organic sediments are those derived by the accumulation of remains of organisms, such as shells of marine organisms, remains of plants and animals eg., Limestone (Calcareous rocks) and Coal (Carbonaceous rocks).

3. Metamorphic Rocks : Metamorphic rocks are those which are formed by the process of metamorphism or alteration of pre-existing

rocks. Metamorphism means change of form which may be physical or chemical or both by the influence of heat and pressure.

Example:

a) Granite -> Gneiss	d) Sandstone -> Quartzite
b) Basalt -> Schist	e) Coal -> Graphite
c) Limestone -> Marble	f) Graphite -> Diamond

Metamorphic rocks are the hardest rocks on the earth. These rocks supply precious stones. ex :-Sapphire, Ruby and Emerald and Diamonds etc.

FORCES OF THE EARTH'S CRUST

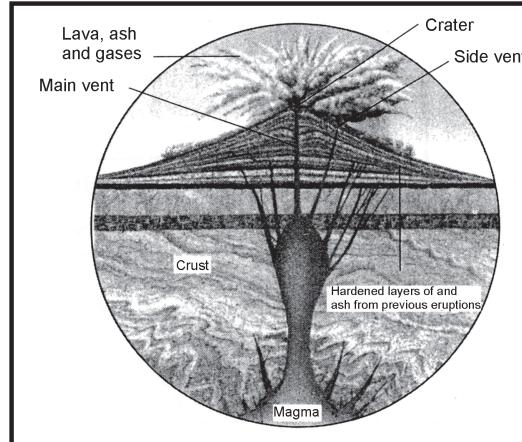
The Earth has two important forces that change the face of the earth. They are internal forces and external forces.

1. INTERNAL FORCES

These are the forces which originate inside the crust and influence the surface features of the earth eg., Volcanoes, Earthquakes etc. The internal forces are also called Endogenic forces.

VOLCANOES

A volcano is a vent or narrow opening in the Earth's crust connected by a pipe to an underlying magma chamber, through which magma, rock fragments, lava, ash, steam, flames and other gases are emitted from the interior of the Earth. A passage in the earth's crust through which magma and other volcanic materials are ejected is called 'Vent'. The funnel-shaped hollow at the top of the cone of a volcano is called 'Crater'. A large basin-shaped crater bounded by steep sides is known as 'Caldera'.



Structure of a volcano

Types of Volcanoes : On the basis of the periodicity or frequency of eruption volcanoes are classified into three types.

Active Volcanoes: Volcanoes which constantly eject lava, gases, ashes etc., are known as active volcanoes. There are about 600 active volcanoes in the world eg., Mt. Stromboli and Mt. Etna in Italy, St. Helens in USA, Mauna Loa in Hawaiian islands, Pinatubo in Philippines etc.

Dormant Volcanoes: Dormant volcanoes are those which have erupted in the past and are likely to erupt again but have remained inactive for fairly long periods eg., Mt. Vesuvius in Italy, Mt. Fujiyama in Japan, Mt. Kilimanjaro in Tanzania, Mt. Krakatoa in Indonesia.

Extinct Volcanoes: Extinct volcanoes are those which were active in the remote geological periods. These are not likely to be active once again eg., Gorongoro in Tanzania, Arthur's Seat in Scotland.

Facts file

Super volcanic eruptions of the world

1. Mt. Vesuvius (Italy)
2. Mt. Krakatoa (Indonesia)
3. Mt. Pelee (West Indies)
4. Mt. Fujiyama or Fuji, a volcano worshipped by people of Japan.

Volcanic materials: The materials ejecting out from the volcanoes are of three types. **Solid:** Volcanic bombs, cinders, scoria, pumice, dust, ash. **Liquid:** Lava. **Gases:** Sulphur, Hydrogen, Carbon dioxide.

Distribution of Volcanoes: Volcanoes occur in many regions of the world, including islands, young mountain ranges and plateaus of the continents. Most important regions are: **1. The Circum-Pacific Belt or Pacific Ring of Fire:**

Coastal margins of the Pacific Ocean consisting of Philippines, Japan, USA, Central America, South America etc. **2. Mid-Atlantic Belt:** Iceland, West Indies **3. Mid-Continental Belt:** Italy, Spain, France, Greece, Turkey etc., **4. Important Islands:**

EARTHQUAKES

Earthquake is a shock or series of shocks or tremors, due to a sudden movement of crustal rocks generated within the crust or mantle.

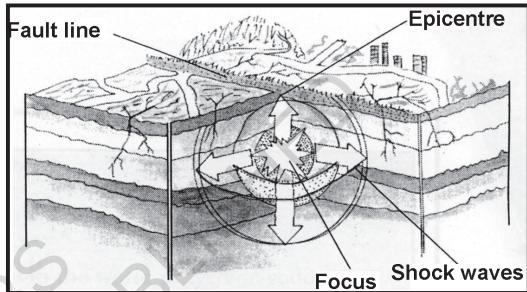
The point of origin of the earthquake in the earth's crust is called the Seismic focus or Hypocentre.

The point on the earth's surface vertically above the seismic focus is called the Epicentre.

The scientific study of earthquakes is called Seismology. The origin, time, velocity and direction of seismic waves are recorded by an instrument known as Seismograph.

Causes of the Earthquakes

Plate Tectonics: The earth's crust consists of many major and minor plates. These plates are not stationary. The plate boundaries are dynamic places and are the primary location of earthquake activity (Circum-Pacific Belt).



Actions of Earthquake

Volcanic Eruptions: Volcanic earthquakes are caused by gas explosions (Krakatoa volcano of Indonesia).

Faulting: A fault consists of a fracture in a rock along with a great deal of displacement takes place. Earthquakes occur when movement of plates takes place along a line of fracture (San Andreas fault of California in USA).

Man made factors: Over interaction of man with nature is also one of the main causes of the occurrence of many of the earthquakes. The extraction of minerals, deep underground mining, huge dams and reservoirs, nuclear tests etc., (Koyna dam in Maharashtra, Hoover dam in USA).

Earthquake Waves

The earthquake or seismic waves originate in the seismic focus and travel towards the epicentre in ripples or concentric circles. The three important earthquake waves are:

1. Primary Waves (PW): Primary waves are also known as longitudinal or compressional waves. These are the fastest earthquake waves and the first waves to reach the surface. They can pass through solid, liquid and gaseous matters.

2. Secondary Waves (SW): Secondary waves are also known as transverse or distortional waves. These waves cannot pass through liquids. They reach the epicentre after the primary waves.

3. Surface Waves (LW): Surface waves are also called long waves. They are the slowest earthquake waves but are responsible for the highest destruction on the surface of the earth.

The magnitude and intensity of earthquakes is recorded by using **Richter scale**.

The Earthquakes are very dangerous and destructive. They cause large-scale deaths, loss to property, landslides, flash floods, damage to bridges, roads, railway lines etc.

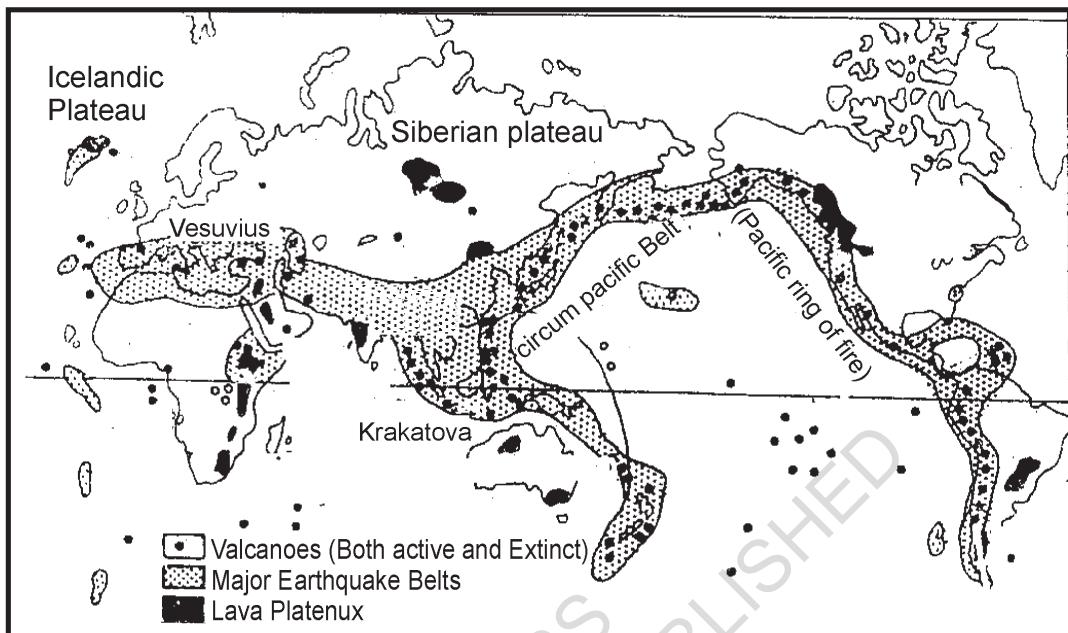
Tsunami: Tsunami is a large sea wave occasionally experienced along the coasts of Japan and in other regions caused by an underwater earthquake. In Japanese language 'Tsunami' means 'harbour waves'.

Facts file

1. On 26th Dec, 2004 a Tsunami in the Indian ocean swept the coastal low lands of Indonesia, India, Sri Lanka, Thailand etc.
2. On 11th Mar, 2011 a Tsunami in the Pacific ocean caused huge damage in the eastern coastal regions of Japan (Fukushima, Sendai, Miyagi etc).
3. Some seismic recording centers of India: Gowribidanur, Kodai-kanal, Pune, Hyderabad, Dehradun.

Distribution of Earthquake - Prone regions

1. The Circum-Pacific Belt – Regions around the Pacific ocean (New Zealand, Philippines, Japan, USA, Peru etc.,).
2. The Mediterranean Belt – Regions around the Mediterranean sea.
3. The Himalayan Belt – The Siwalik region of India.



Earthquakes and Volcanic Regions

2. EXTERNAL FORCES:

External forces are the natural forces that modify the surface of the earth. The important forces are temperature, wind, rainfall, snowfall, river, glacier etc., These forces act on the surface of the earth and constantly change its features.

Weathering: Weathering is the wearing away or breaking down or gradual disintegration of rocks by agents (Temperature, rainfall, wind etc.) present in the atmosphere. The three types of weathering are:

1. Mechanical weathering: When the rock is broken and disintegrated without any chemical alteration, the process is called Physical weathering or Mechanical weathering. The important processes of mechanical weathering are Granular disintegration, Block disintegration and Exfoliation. The agents of mechanical weathering are temperature, wind, frost etc.

2. Chemical weathering: Chemical weathering is mainly brought about by the action of substances dissolved in rainwater. This type of weathering results in changing the composition of minerals present in the rocks. There are four types of chemical weathering. They are:

- a. Oxidation:** In this type of chemical weathering oxygen dissolved in water reacts with certain minerals, especially iron, to form oxides.
- b. Carbonation:** When the rainwater falls on limestone rocks, the calcium carbonate present in the rocks absorbs carbon dioxide from rainwater and becomes calcium bicarbonate.
- c. Hydration:** Hydration is the process by which some minerals in crystalline form absorb water and become a powdery mass. Feldspar is a common rock forming crystalline mineral.
- d. Solution:** When the rain falls on the surface of the land, rainwater dissolves soluble minerals present in the rocks.

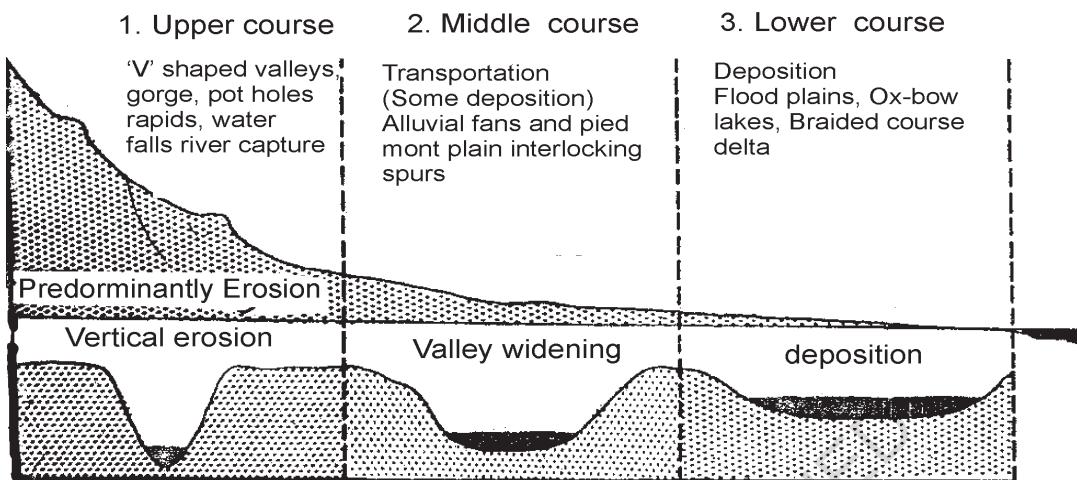
3. Biological weathering: Living organisms like plants, animals and human beings play a role in one way or another in the weathering of rocks. This type of weathering includes both physical and chemical weathering. (a) **Plants:** Growth and expansion of roots. (b) **Animals:** Burrowing animals, earthworms, rabbits, rats. (c) **Human beings:** Mining, quarrying, construction works.

DENUDATION

Agents of Denudation: Denudation is the action of changing landscape or changing the surface of the earth by various natural agents such as Rivers, Glaciers, Underground water, Wind, Sea waves etc., The work of these natural agents are Erosion, Transportation and Deposition. These processes produce distinct relief features.

River: A mass of fresh water flowing from its source to mouth along a definite course is called 'River'. The river is a most prominent agent of denudation. The place where a river takes its birth is called 'Source' and 'Mouth' is the point where it meets sea or ocean. 'Tributaries' are the feeders or small streams which supply water to river along its course. The point where a tributary joins the main river is called 'Confluence'.

Course of the River: The course of a river from its source to mouth is divided into three stages. These stages are Upper course, Middle course and Lower course.

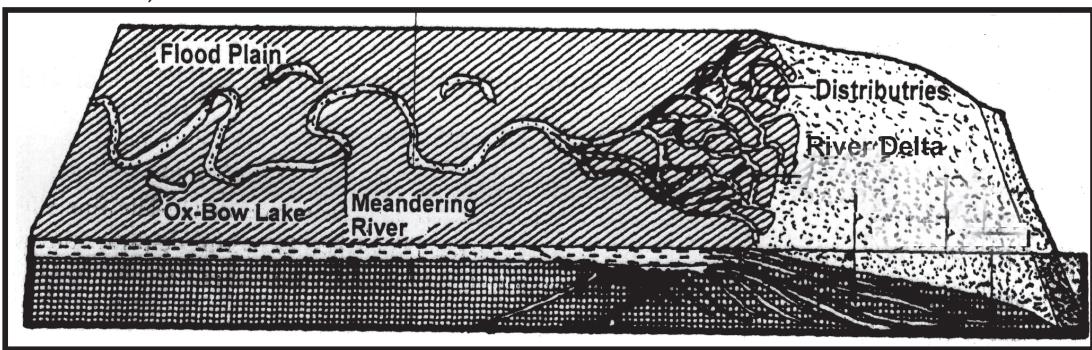


Stages of the river course and associated land forms

The Upper Course: Vertical erosion is most common due to steep slopes leading to deepening of valleys, resulting in the formation of gorges, canyons, 'V' shaped valleys, waterfalls (Angel falls, Niagara falls, Jog falls).

The Middle Course: In the middle course, the river path has a moderate slope and velocity is less than that in the upper course. The volume of water increases when many tributaries join the main river. The main work of the river in this stage is transportation of sediments and little deposition. The important landforms in this stage are Alluvial fans, Meanders.

The Lower Course: In this stage the slope of the river course is very minimum. The volume of river water is more and deposition is the main work of the river. The important landforms in this course are Flood plains, Natural levees, Ox-bow lakes, Deltas (Sundarban delta, Nile delta).



River

“The work of river is called “Fluvial Cycle”.

Facts File:

Estuary – Tidal mouth of a river broadening into the sea / ocean.
Delta – A fan shaped, low lying area of deposits at a river mouth.

GLACIER : Glaciers are slowly moving, compacted masses of ice and snow found in the high mountains and polar regions. The mass of ice or snow is pulled down by its weight and due to the force of gravity.

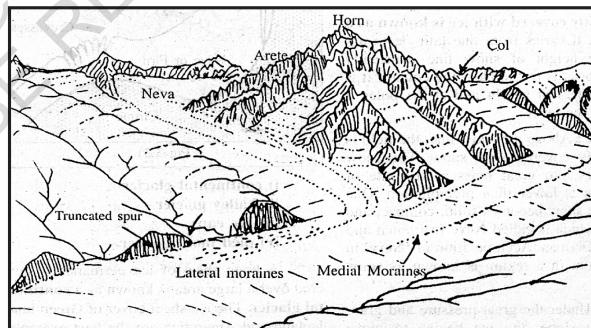
Types of Glacier: Glaciers are divided into two types a)Continental glaciers and b)Mountain glaciers.

Continental glaciers: Continental glaciers are extensive ice sheets found in polar regions eg., Greenland and Antarctica.

Mountain or Alpine or Valley glaciers: The glaciers found in the Polar regions regions are called Mountain glaciers.

Glacier as an agent of denudation performs the work of erosion, transportation and deposition. The erosional work of glaciers is mainly side cutting. The landforms resulting by this are Cirque, Horn, Arete, 'U' shaped valleys, Hanging valleys, Rock steps etc.

The transportation and the deposition work of glaciers goes almost together. The important depositional landforms produced by glaciers are Moraines, Drumlins, Esker, Kames, Outwash plains, Till plains etc.



Work of Glacier

'Moraines' are the most important landforms of the glaciated region. Moraines are of four types. **a) Lateral moraines:** Rock debris deposited along the sides of the glacial valley. **b) Medial moraines:** When two lateral moraines meet, it forms medial moraines. **c) Ground moraines:** Rock materials found on the floor or at the bottom of the glacial valley. **d) Terminal moraines:** The glacial deposits found at the end of the glacier.

The work of Glacier is called “glacial cycle.”

UNDERGROUND WATER

Underground water is the subsoil water found on account of percolation or seepage of water into the ground. The underground water which seeps into the ground passes through various layers of rocks. The rocks which allow the water to percolate are called 'permeable' or 'porous' rocks and the rocks which do not allow the water inside are called 'impervious' or 'non-porous' rocks. The porous rock beds which hold large amount of underground water are called aquifers. The permeable rocks allow and hold water and form springs. A Spring is a place where the underground water comes out naturally.

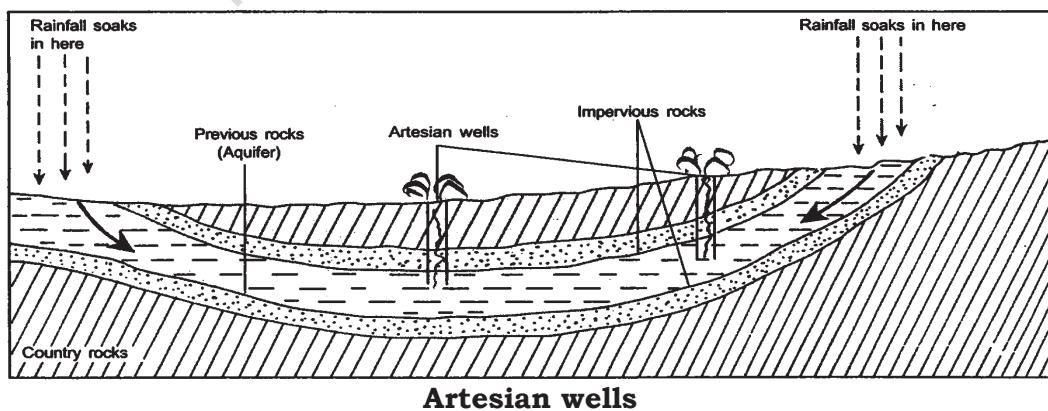
Types of spring:

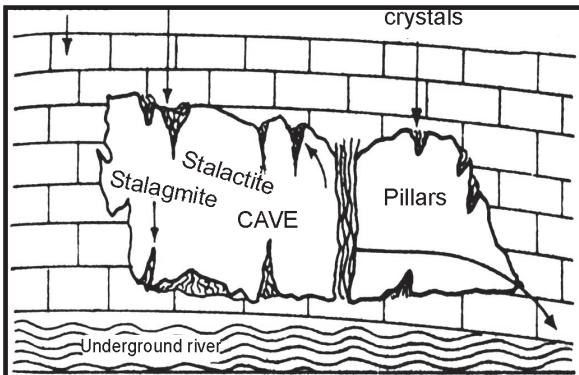
- 1. Perennial spring:** It is a spring through which water comes out continuously.
- 2. Intermittent springs:** These are springs through which water comes out intermittently (not continuous) and they are also called 'Periodic spring'.

3. Hot springs: Whenever warm or hot water comes out naturally it is called hot spring or thermal spring. They are usually found near the volcanic regions.

4. Geyser: Geysers throw a jet of hot water (like a fountain) and steam into the air at regular or irregular intervals eg., Old Faithful in Yellowstone National Park of USA.

5. Artesian wells : When underground water is stored in a basin shaped layer between two non-porous rocks, the water cannot come out naturally. If an artificial hole is made to the porous rock, the water comes out like a fountain. These are called Artesian wells. These wells are common in Australia.





Activity of Under ground water

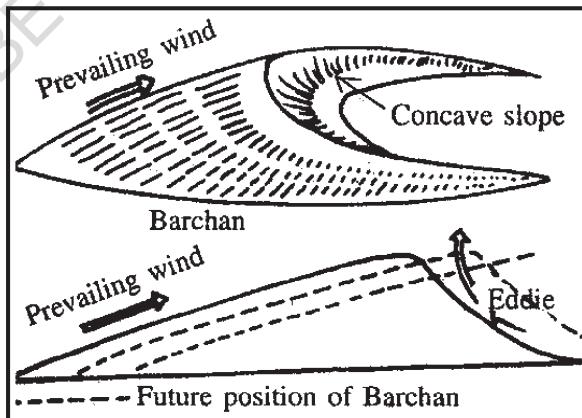
Facts File : Limestone caves

1. Akalagavi (Ulavi) caves of Uttara Kannada in Karnataka
2. Belum and Bohra caves of Andra Pradesh

Relief features formed by underground water in limestone region is called 'Karsttopography'.

WIND

The denudation work of wind is common in the arid or desert regions. When the winds of high velocity blow over desert areas they erode, transport and deposit materials to produce different landforms. The important landforms associated with the erosional work of the wind are Rock pedestals, Mushroom rock, Inselberg. The depositional landforms are Sand dunes – Longitudinal sand dunes, Barchans and Loess deposits.

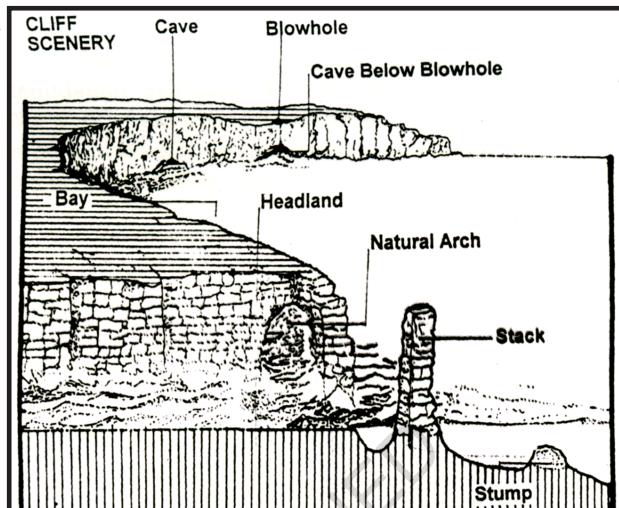


Barchans

Barchans are semi-circular or crescent shaped sand deposits most common in the deserts. Loess is the sand particles found beyond the borders of deserts (Yellow soil in China).

Work of wind is called "Aeolian cycle".

SEA WAVES : Like all other agents, sea waves are also an important exogenic agent of denudation. Sea waves are the regular undulation of water on the sea or ocean. The work of sea waves is significant along the sea shore or coasts. The important landforms associated with sea waves are Cliff, Sea cave, Sea stack, Sea arch, Headland, Sand bars, Beaches, Lagoons etc.



Sea Waves

Exercises

I Fill in the blanks with suitable words:

- 1 The continental crust is also called _____.
- 2 Vast basin shaped volcanic mouth is _____.
- 3 The most destructive earthquake waves are _____.
- 4 Stalactites and Stalagmites are most common in _____.
- 5 The Beaches are formed by _____ work.

II Answer the following questions:

- 1 Mention the three major layers of the interior of the Earth.
- 2 Name the types of volcanoes on the basis of frequency of eruption.
- 3 Mention the important earthquake zones of the world.
- 4 What is weathering? Name the three main types of weathering.
- 5 Name the landforms associated with the work of river.

III. Match the following:

A	B
1 SIMA	a) Earthquake
2 Sandstone	b) Yellow soil
3 Epicentre	c) Oceanic crust
4 Geyser	d) Sedimentary rock
5 Loess	e) Underground water

IV Define the following:

1 Aqueous rocks	4. Tsunami
2 'Pacific ring of fire'	6. Continental glacier
3 Mechanical weathering	7. Hot spring
4. Carbonaceous rocks	

V Terms to remember:

1 NIFE	4 Mountain glacier
2 Arenaceous and Argillaceous rocks	5 Aeolian cycle
3 Tectonic forces	6 Beaches

VI Activities:

- 1) Collect the different rocks from your environment.
- 2) Visit nearest falls and know how they are formed ?

CHAPTER-3

ATMOSPHERE

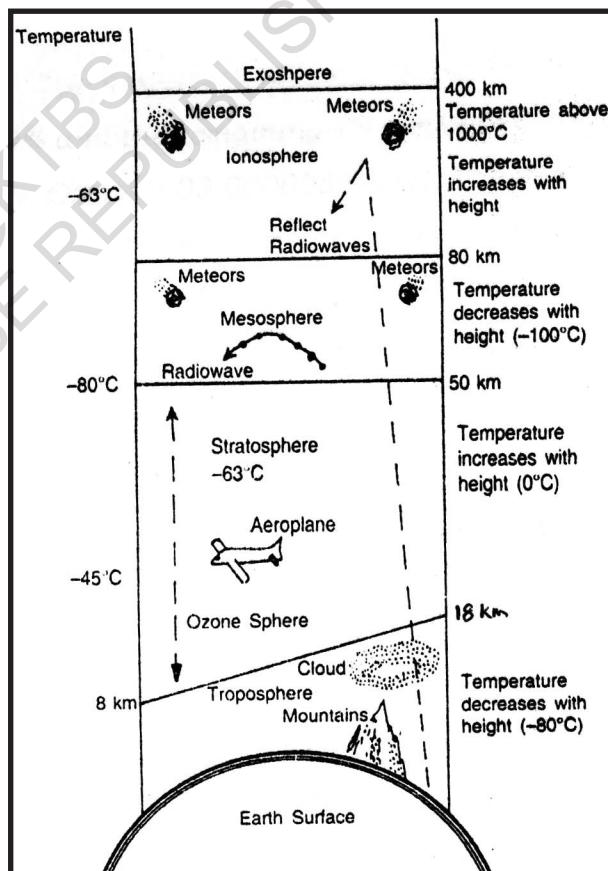
After studying this chapter you would know :

- the meaning, importance, composition and formation of atmosphere.
- about the components of atmosphere, temperature, pressure, winds humidity, clouds and their functions and effects.
- the differences between atmosphere and climate.

Do you know, how we are protected and helped by the envelope of air ?

Meaning and importance:
Atmosphere is a thin layer of gases, dust particles and water vapour surrounding the Earth. This layer of gases forms protective boundary between the outer space and the Earth's surface. The thickness of the atmosphere is around 1000 kms. Atmosphere is very important for all forms of life on the earth. Different gases of atmosphere help plants, animals and human beings. Atmosphere traps heat and makes Earth a planet for all the living organisms.

Composition of atmosphere: The atmosphere is a mixture of different gases, dust particles and water vapour. The important gases in the atmosphere are Nitrogen - 78.08%, Oxygen- 20.94% and the remaining 1% consists of Argon - 0.93%, Carbon dioxide



Layers of atmosphere

- 0.03%, Ozone - 0.000005% etc. The atmosphere also contains dust particles which help us in the formation of water droplets. The water vapour in the atmosphere is the source of clouds and precipitation. The atmosphere traps heat and energy and has influence on the weather conditions of a place.

Layers of Atmosphere: The atmosphere may be divided into five important layers on the basis of its characteristic features. These are: Troposphere, Stratosphere, Mesosphere, Thermosphere (Ionosphere) and Exosphere.

Troposphere : Troposphere is the lowest layer of the atmosphere. It extends upto 18 kms at the equator and 8 kms near the poles. This layer has all the atmospheric elements such as temperature, pressure, winds, clouds, rainfall etc. All weather changes occur in the troposphere. Temperature and pressure decrease with the increase of altitude.

Stratosphere : Stratosphere is the second layer of the atmosphere. This layer extends upto 50 kms from the surface. It lies between troposphere and mesosphere. In this layer Ozone is the most important gas which absorbs 'ultraviolet rays' of the sun and protect all forms of life on the Earth. This layer is free from clouds and other important weather phenomenon and provides ideal flying conditions for jet aircrafts.

Mesosphere : Mesosphere is the third layer in the Earth's atmosphere. It extends up to 80 kms from the surface and lies above stratosphere. In this layer temperature decreases with the increase in altitude. This layer has the coldest temperature in the atmosphere.

Thermosphere: Thermosphere layer lies next to Mesosphere. In this layer temperature rises drastically. It is also called 'Ionosphere' as the gaseous atoms are ionized due to very high temperature. The ions found in this layer help in reflecting radio waves.

Exosphere: Exosphere is the top most layer of the atmosphere. In this layer elements of atmosphere are rare and pressure is extremely low.

Elements of Weather

Weather condition of a place is influenced by various elements such as temperature, pressure, wind, humidity, clouds, rainfall etc.

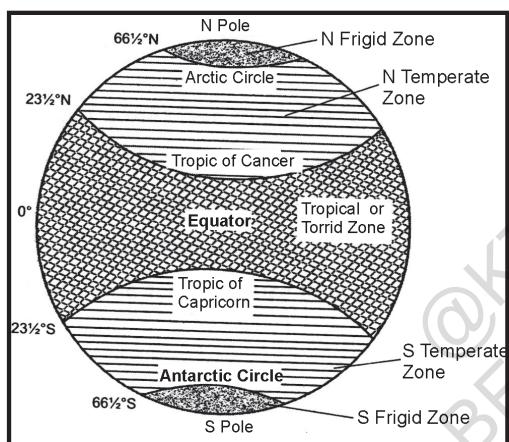
*Atmospheric condition of a place at a given time is called '**Weather**'. In contrast the average weather condition of an area over a long period of time is called '**Climate**'.*

TEMPERATURE

The Sun is the main source of energy to the Earth which supplies heat through insolation. Insolation means incoming solar radiation from the sun to the Earth. Temperature is recorded by an instrument called 'thermometer'. Centigrade and Fahrenheit are the important thermometers used to measure atmospheric temperature. The important factors that influence atmospheric temperature are latitude, altitude or height, distance from the sea, wind, ocean currents, relief, clouds, rainfall etc.

Normal lapse rate: It is the decreasing rate of temperature with the increase of altitude. The rate of decrease is 1°C for every 165 meters or 6.4°C for every 1000 meters of height (1 km).

Inversion of temperature : In some situations temperature also increase with increasing height. This takes place in mountain valleys during long winter nights with clear sky, dry air, no wind and snow covered surface.



Temperature Zones

Temperature Zones : The distribution of temperature is not uniform on the Earth's surface. On the basis of insolation, the globe is divided into three temperature zones. They are:

Torrid zone : This is the zone of high temperature. This region is found between 0° or Equator and Tropic of Cancer in the north ($23\frac{1}{2}^{\circ}$ N) and the Equator and Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S) in the south. This region receives direct rays of the Sun.

Temperate zone : This is the region where the temperature is neither very hot nor cold. This region lies between $23\frac{1}{2}^{\circ}$ N to $66\frac{1}{2}^{\circ}$ N (Tropic of Cancer to Arctic circle) and $23\frac{1}{2}^{\circ}$ S to $66\frac{1}{2}^{\circ}$ S (Tropic of Capricorn to Antarctic circle).

Frigid zone : It is the coldest region. This zone is found between $66\frac{1}{2}^{\circ}$ N to 90° N (Arctic circle to North pole) and $66\frac{1}{2}^{\circ}$ S to 90° S (Antarctic circle to South pole). The temperature in this zone is very

low due to slanting rays of the sun. In summer temperature is slightly high and in winter the temperature is low.

Isotherms : Isotherms are lines drawn on the map or globe connecting places having the same temperature.

Facts file :

Places of highest and lowest temperature

1. Al Aziziya of Libya in Africa has recorded the highest temperature (average $+58^{\circ}$ C) Whereas Verkhoyansk of Siberia has recorded the lowest temperature (average -24° C).
2. In India Ganganagar of Rajasthan recorded the highest temperature in summer (average $+54^{\circ}$ C) and Leh of Jammu and Kashmir has recorded the lowest temperature (average -10° C) in winter.
3. Vostok of Antarctica is considered as the coldest place (average temperature -89° C) on the Earth.

ATMOSPHERIC PRESSURE

Air has weight and it exerts pressure. This is called atmospheric pressure. Air pressure is measured by an instrument called Barometer. The unit used to show the pressure is millibar (mb). The average air pressure of the atmosphere at the sea level is 1013.25 mb. The atmospheric pressure is affected by many factors such as temperature, rotation of the Earth, altitude, water vapour etc. Temperature is the most important factor that influences atmospheric pressure. The regions which have high temperature record low pressure due to expansion of air, while the regions of low temperature have high pressure due to contraction of air. Thus temperature and pressure are inversely related. The atmospheric Pressure decreases with the increase in altitude. The amount of decrease is about 34 mb per every 300 meters altitude.

Major pressure belts of the Earth

1. The Equatorial low pressure belt
2. North Sub- tropical high pressure belt
3. South Sub-tropical high pressure belt
4. North -Sub- Polar low pressure belt
5. South Sub-polar low pressure belt
6. North Polar high pressure belt
7. South Polar High pressure belt

Equatorial low pressure belt: The equatorial low pressure belt is a zone of high temperature and low pressure. It lies between 0° to 5° North and South of the equator. This region gets direct rays of the Sun almost throughout the year. Hence air is always very warm and hot. This is a calm region with very little wind. So it is known as 'Doldrum' means 'belt of calm' (equatorial calm). This region is also called Inter- Tropical Convergence Zone (ITCZ) where the trade winds converge.

Sub-tropical high pressure belts: Sub-tropical high pressure belts are found between 30° and 35° north and south of the equator. There are two sub-tropical high pressure belts. **(a) North sub-tropical high pressure belt:** This belt is found between 30° to 35° north latitudes. This region is also popularly called 'Horse latitudes'. **(b) South sub-tropical high pressure belt:** This belt is found between 30° to 35° of south latitudes.

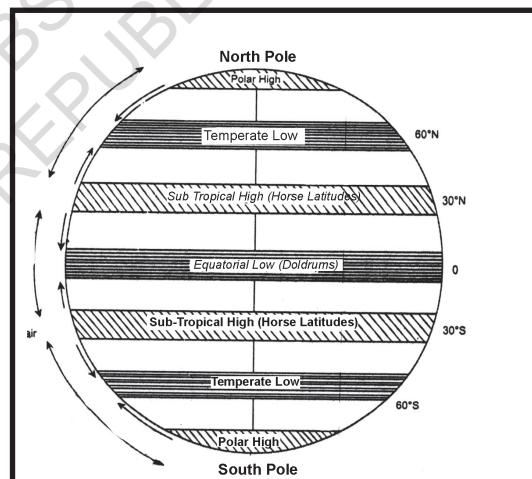
Sub-polar low pressure belts: Sub-polar low pressure region is found between 60° to 65° north and south of the equator. There are two sub-polar low pressure belt **(a) North sub-polar low pressure belt** (60° north to 65° north). **(b) South sub-polar low pressure belt** (60° south to 65° south). These are stormy especially in winter.

Polar high pressure belts: Polar high pressure belts region is found between 80° to 90° north and south latitudes in both hemisphere. These are extremely cold regions with very high pressure throughout the year.

Isobars: These are imaginary lines drawn on the map or globe connecting places having the same pressure.

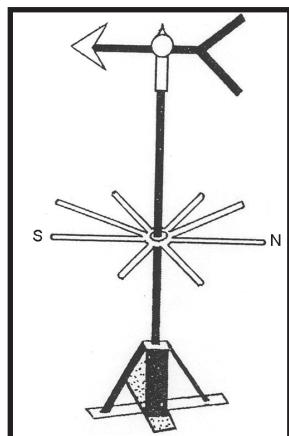
WIND

Wind is the horizontal movement of the air on the surface of the Earth. Wind blows on the Earth due to rotation of the Earth and difference in pressure.

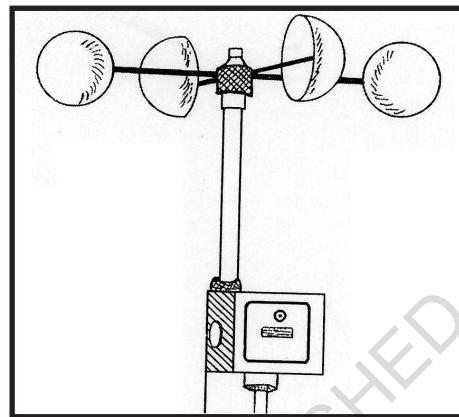


Pressure belts of the world

The direction of the wind is shown by an instrument called 'wind vane' or 'weather cock'. 'Anemometer' is used to measure the speed of the wind.



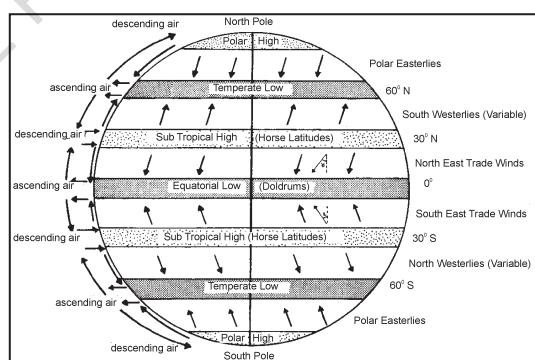
Wind Vane



Anemometer

Types of wind : Winds are classified into 4 major types. They are; Planetary winds, Seasonal winds, Local winds, Cyclones and Anti cyclones.

1. Planetary Winds : Planetary winds are also called 'Permanent winds' or 'Prevailing winds' or 'Regular winds' which blow more or less in the same direction through out the year. These winds play a major role in climate change, desert formation, guide navigation routes, etc. There are three types of planetary winds. Trade winds, Anti-trade winds and Polar winds.



Planetary Winds

Trade Winds : These winds blow from sub-tropical high pressure belts to equatorial low pressure region. The trade winds in the northern hemisphere blow from NE to SW direction (North East trade winds) and in the southern hemisphere they blow from SE to NW direction (South East trade winds).

Westerlies or Anti-trade Winds : These winds blow from sub-tropical high pressure belts to sub-polar low pressure belts. These

are from south-west to north-east in northern hemisphere and north-west to south-east in the southern hemisphere. The westerlies of southern hemisphere are very strong over the oceans. Hence they are called 'Roaring forties' (40° south latitude), 'Furious fifties' (50° south latitude) and 'Shrieking sixties' (60° south latitude).

Polar winds : These are also called Easterlies. These winds blow from polar high pressure belts to sub-polar low pressure belts. They blow from North East to South West in the northern hemisphere and South East to North West in the southern hemisphere. These are the cold dry winds blowing from the polar ice-caps.

2. Seasonal Winds: Seasonal winds are also called periodic winds. These winds change their direction periodically or seasonally. The monsoon winds of India are the typical periodic winds. In India South west monsoon winds blow from SW to NE direction during June to September and North east monsoon winds blow from NE to SW direction from late September to middle of December.

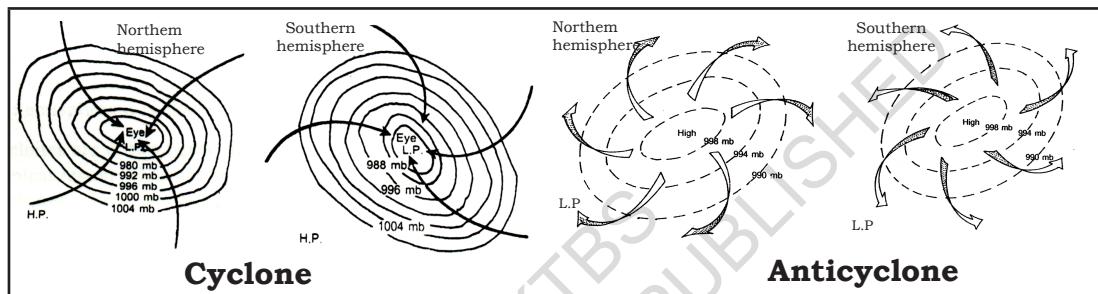
3. Local Winds: Periodic winds are the result of variation in local temperature, pressure, humidity which in turn are attributed to the formation of air currents, crossing mountain ranges, valleys and other relief barriers. The important periodic and local winds are Land breeze, Sea breeze, Mountain breeze (Katabatic winds), Valley breeze (Anabatic winds) and other few winds are Loo (India), Chinook or Snow eater (USA), Fohn (Alps region), Mistral (France), Sirocco (Sahara region), Brick Fielder (Australia), Blizzard (Antarctica) etc.

4. Cyclones and Anti-cyclones: These winds blow due to great variation in pressure. These are temporary but sometimes dangerous and destructive.

a. Cyclones: Cyclone is a small low pressure area in the centre surrounded by high pressure. The winds blow spirally towards the low pressure area. In the northern hemisphere the direction of cyclonic winds is anti-clockwise or counter clockwise and in the southern hemisphere it is clockwise. Cyclones are of two types: • **Tropical cyclones:** These are found in the tropical region. They are very powerful and disastrous. • **Temperate cyclones:** These are found in the temperate region. They are comparatively less strong and less dangerous.

Cyclones are called by different names in different regions. Japan and China – **Typhoon**, USA and Mexico – **Hurricane**, Australia – **Willy willes**, India – **Cyclone**, Russia – **Whirlpool**. In the last few years Indian coasts has experienced few disastrous cyclones. Some of them are Bola, Nargis, Nisha, Aila, Laila, Bijli, Jal etc.

b) Anti-Cyclones: An anti-cyclone is a high pressure area in the centre with winds blowing outwards, towards the low pressure areas. In the northern hemisphere the direction of anti-cyclone wind is clockwise and in the southern hemisphere it is anti-clockwise.



HUMIDITY

Humidity is the amount of water vapour or moisture present in the air. Humidity is measured by using an instrument called Hygrometer or Psychrometer.

Types: Humidity is expressed in different ways. Important among them are Absolute humidity, Relative humidity and Specific humidity.

- **Absolute humidity:** This refers to total amount of water vapour present in a given volume of air. It does not take temperature into consideration.
- **Relative humidity:** Relative humidity is the ratio between the actual amount of water vapour present in the air and the amount of water vapour the air can hold at that temperature. It is expressed in percentage.

The actual amount of water vapour in the air

Relative humidity = $\frac{\text{The actual amount of water vapour in the air}}{\text{The maximum amount of water vapour the air can hold}} \times 100$

The maximum amount of water vapour the air can hold

- **Specific humidity:** It is the actual amount of water vapour present in a given mass of air.

CLOUDS

Cloud is a mass of small water drops or ice crystals, formed by the condensation of the water in the atmosphere, usually at a considerable height above the Earth's surface.

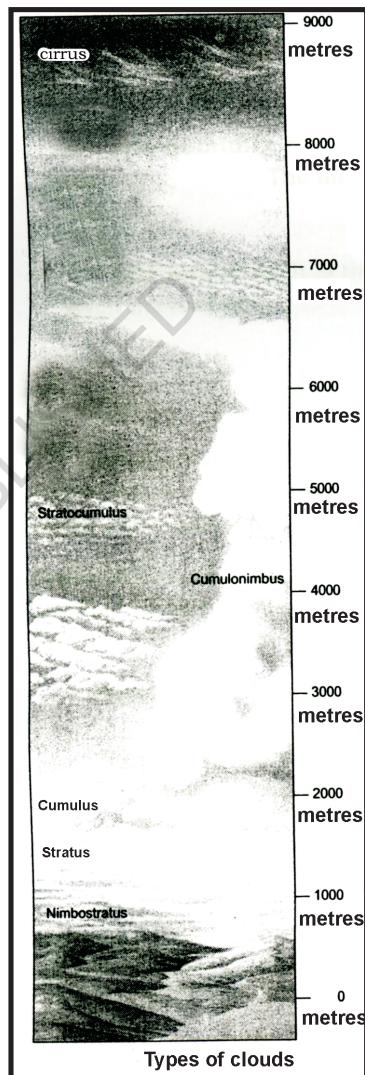
Types of clouds: Clouds are classified on the basis of their shapes and heights at which they occur. The important types of clouds are the Stratus, the Cumulus, the Cirrus and the Nimbus clouds.

• **Stratus:** Stratus clouds are usually low clouds occurring at less than 2 km of height. They appear as thin sheets or layers of large extent. Stratus clouds are associated with fair weather.

• **Cumulus:** Cumulus clouds are cauliflower-shaped clouds of great vertical extent. The base of cumulus clouds is nearly horizontal, while the top has a dome-shaped appearance. These are popularly called 'wool packs'. Cumulus clouds are rain-bearing clouds.

• **Cirrus:** Cirrus clouds are the highest clouds in the atmosphere. These clouds resemble 'curls of hair', have a feathery or fibrous appearance. They indicate fair weather and often given a brilliant sunset. They look like patches of cotton fibres floating in the air. Their popular name is 'mare's tail' or 'witch's broom'

• **Nimbus:** Nimbus clouds are rain clouds which occur at low levels. These clouds have the shape of stratus or cumulus. They are dark-grey or black in appearance. They cause heavy rainfall or snowfall. The Nimbo-stratus are thick, heavy, rain bearing clouds.

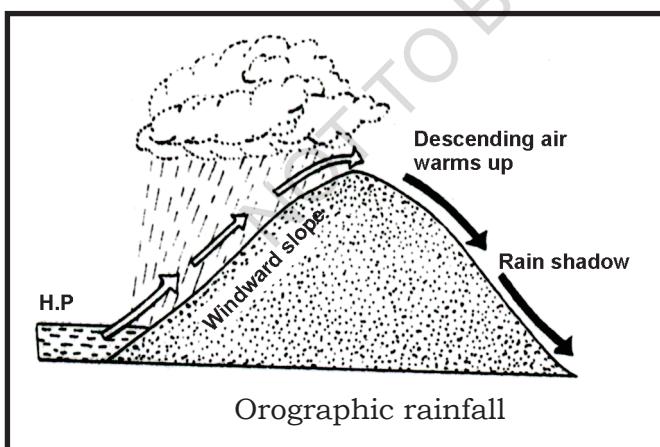
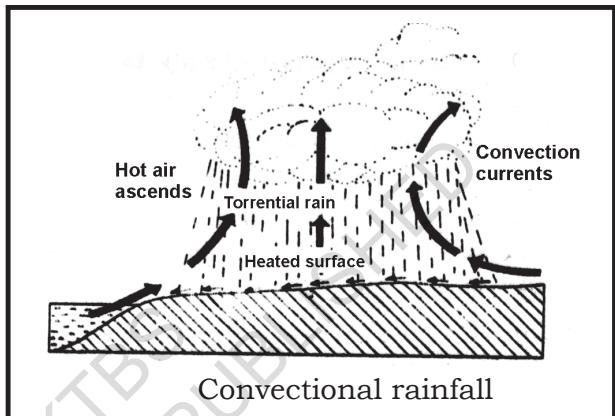


RAIN FALL

Precipitation in the form of water droplets is called rainfall. The total amount of rain received on a given area during a given time as measured by a rain gauge in MM or inches.

Types of Rainfall: Rainfall is of three types. They are Convectional rainfall, Orographic rainfall and Cyclonic rainfall.

Convectional rainfall: The rain caused by the process of convection is called convectional rainfall. In areas of high temperature, air rises up due to heating. This rising air cools, gets saturated, condensation takes place and later rainfall occurs. Convectional rainfall is very common in the equatorial region and also in the tropical regions in summer. In the equatorial region, convectional rainfall is called 'afternoon rain', as it occurs mostly in the afternoon. It is accompanied by thunder and lightning.



Orographic rainfall:

Orographic rainfall is also called 'Mountain rainfall' or 'Relief rainfall'. When moisture laden air is obstructed by a mountain barrier, the air is forced to rise up. As the air rises upwards, it cools and gets saturated. Further cooling of this air causes condensation resulting in orographic or mountain rainfall.

rainfall. The windward side of the mountain receives more rainfall, while the leeward side receives less. The leeward side is generally called the 'rain shadow region' eg., Mangalore is the windward side and Hassan the leeward side or rain shadow region.

Cyclonic rainfall: In a cyclone the air blows spirally inwards. In the tropical cyclones the air rises upwards in circular movement. So condensation takes place to cause heavy rainfall. The temperate cyclonic rain is also called frontal rain. When the warm air mass and the cold air mass meet, the warm air being lighter is forced to rise over the heavier cold air. The warm air after rising, cools and condenses, resulting in rainfall.

Distribution: The distribution of rainfall on the Earth depends on location and the climatic condition of that region. The most important heavy rainfall areas in the world are the equatorial region, the eastern margins of sub-tropical belts, the western margins between 40° and 60° N and S latitudes. Scanty rainfall regions are the polar areas, the western margins of sub-tropical regions and the tropical and temperate deserts.

Do you know?

1. **Mawsynram** of Meghalaya in India has recorded 1140 cm of rainfall per year. It is considered as the wettest or雨iest region on the Earth.
2. **Agumbe** of Karnataka is called 'Mawsynram of South India'.
3. **Royli** of Rajasthan in India receives lowest rainfall : 8 cm per year
4. **Nayakanahatti** of Chitradurga is considered the driest place in Karnataka.
5. **Atacama** desert of Chile is the driest region on the Earth. It has not received rainfall for the last 200 years.

Weather and Climate

The atmospheric conditions of a smaller area at a particular time is called weather. For example cloudy, sunny, fine weather, etc. The scientific study of weather is called 'Meteorology'. Climate is the average condition of the atmosphere over a long period of time of a larger area e.g., Equatorial climate, Tropical monsoon climate, Desert climate, Mediterranean climate, Tundra climate etc. The scientific study of climate is called 'Climatology'.

Factors affecting the climate of a place: The factors that influence the climate of a place or region are Latitude, altitude, winds, distance from the sea, distribution of land and water bodies, ocean currents, etc.

Exercises

I Fill in the blanks with suitable words:

1. The two major gases of the atmosphere are _____ and _____.
2. The lowest layer of the atmosphere is _____.
3. The average air pressure of the atmosphere at the sea level is _____.
4. Westerlies is also known as _____.
5. The scientific study of weather is _____.

II Answer the following questions:

1. What is atmosphere ?
2. Name the important layers of the atmosphere.
3. What is the significance of ozone layer?
4. What is Doldrum? Where is it found?
5. Name the different types of planetary winds.
6. What are local winds? Give any two examples.
7. Mention the different types of clouds.
8. Distinguish between weather and climate.

III Define the following :

1. ionosphere	4. horse latitudes
2. normal lapse rate	5. orographic rainfall
3. torrid zone	6. climatology

IV Terms to remember:

1 insolation	4 roaring forties
2 inversion of temperature	5 nimbus
3 anemometer	6 meteorology

V Activity:

Draw the picture of planetary winds.

CHAPTER-4

HYDROSPHERE

After studying this chapter you :

- know the different kinds of water bodies.
- understand the structure of the ocean bed.
- know the ocean currents, their types and conservation of oceans.
- know how to mark oceans, gulf, bay and strait on Indian map.

Water- The source for marine life and maritime climate

Distribution of Water bodies

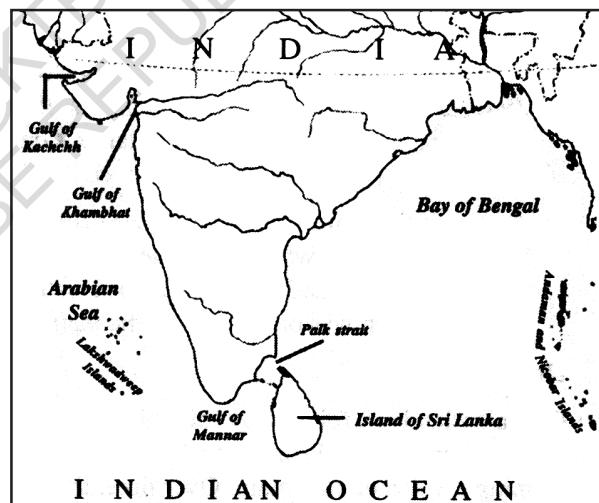
The Earth is popularly called 'Blue planet' or 'Watery planet' because about 71% of the total area of the earth or 361 million sq. km is covered by water. The major water bodies of the world are the Pacific ocean, the Atlantic ocean, the Indian ocean and the Arctic ocean.

Oceans: Oceans are deep and large expanse of water found between the continents. The Indian ocean between Asia, Africa and Australia. The Atlantic ocean between North America and Europe and so on.

Sea: A sea is a part of the ocean extended or projected far inland. Seas are smaller compared to oceans, e.g., the Arabian sea, the Caspian sea, the Red sea.

Gulf: Gulf is a part of an ocean or sea that penetrated into the land. It is smaller than a sea. The size, shape and depth of a gulf varies from one to another, e.g., the Gulf of Mannar, the Persian Gulf, the Gulf of Mexico.

Bay: Bays are small semi-circular water bodies partially surrounded by land. The depth, extent and size of bays vary from one to another, e.g. the Bay of Bengal, the Bay of Biscay, the Bay of Fundy, Hudson Bay.

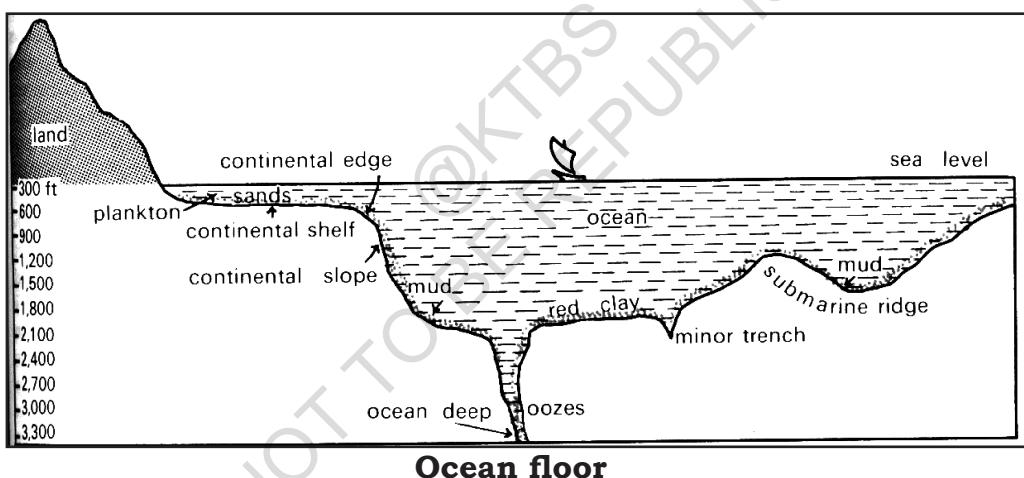


Strait: A strait is a narrow strip of water body joining two large water bodies, eg., Palk strait, Strait of Gibralter, Bering strait.

Isthmus: Isthmus is a narrow stretch of land mass joining two large land masses. Isthmus is the most important location for constructing ocean canals eg., a) Suez canal between the Mediterranean sea and the Red sea b) Panama canal between the Atlantic ocean and the Pacific ocean.

RELIEF OF THE OCEAN FLOOR

The sea or ocean floor also has various features like the relief features of the earth's surface. The knowledge of relief features of the ocean floor is very necessary to know the importance of ocean. On the basis of the characteristic features, the ocean floor is divided into four major parts. They are : a) The continental shelf b) The continental slope c) The deep sea plain d) The ocean deeps



1. Continental shelf: This is the shallow area along the sea coast. This part is bordered by the sea coast on one side and continental slope on the other side. The average depth of the continental shelf is 100 fathoms (1 fathom is equal to 6 ft). The depth of the sea in this region gradually increase towards the continental slope. The continental shelf is very important for fishing, aquaculture, navigation and extraction of minerals.

2. Continental slope: This is the second part of the ocean floor and it is very steep. It is a link between the continental shelf and the deep sea plain. Sub-marine canyons are a special feature in this region.

3. The Deep sea plain: This is the vast plain found at the bottom of the sea floor. The deep sea plain is also known as 'abyssal plain' and it covers the largest area of the ocean floor. In this region Sea mounts and Guyots are found.

4. The Ocean deep: The ocean deeps are also called 'Ocean trenches'. These are the deepest part of the ocean floor, e.g. The Challenger deep of Mariana trench in the Pacific ocean near Philippine islands is around 11,033 meters deep and is the deepest point of the oceans. The other trenches are Tonga trench, Kurile trench in the Pacific ocean.

Temperature and salinity of the ocean water

Temperature: Sea or ocean water temperature varies according to latitudes and the depth of the ocean floor. The temperature of the ocean water near the equator is more than that of the temperature near the Arctic and the Antarctic circles. With the increasing depth the temperature of the ocean water decreases. It is because the sunlight can penetrate into the ocean only up to a depth of 200 meters. Within this depth various marine organisms are found in large numbers.

Salinity: Salinity is the percentage of salts dissolved in the sea or ocean water. The average salinity of the ocean water is 35 PPT (Parts per thousand) or 35 grams/¹⁰⁰⁰ grams). The salinity of ocean water is very high near the tropics and it is very low near the poles. At the equatorial region the salinity is average due to high evaporation and precipitation.

Why is sea water salty?

The water flowing from the land to the sea (river) carries many kinds of salts and deposits them in the sea or ocean. Due to high temperature, water is evaporated continuously and the salts remain in the sea or ocean. This continuous process over a long period of time has resulted in the accumulation of salts in the sea water.

Facts file

Saline water bodies of the world

1. Lake Van (Turkey)	- 330/ ¹⁰⁰⁰ ppt
2. Dead Sea (Asia)	- 300/ ¹⁰⁰⁰ ppt
3. Lake Sambhar (India)	- 265/ ¹⁰⁰⁰ ppt
4. Red Sea (Asia and Africa)	- 240/ ¹⁰⁰⁰ ppt

OCEAN CURRENTS

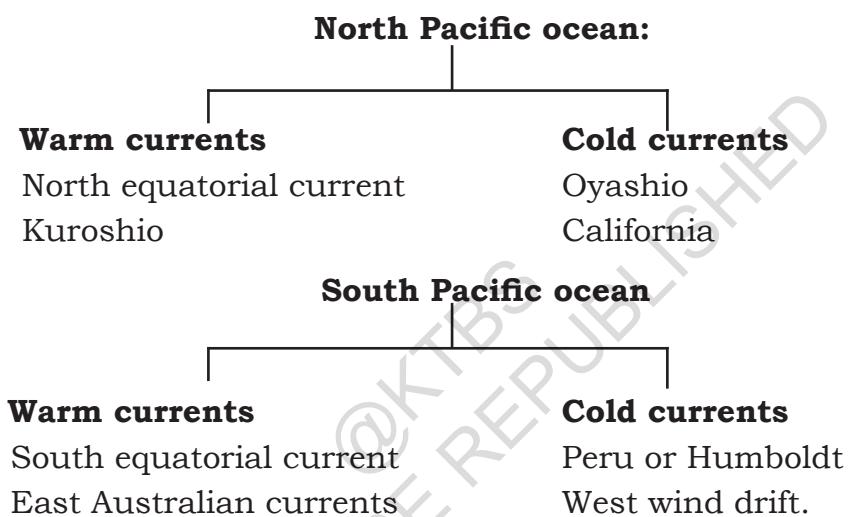
The ocean water has three types of movements. They are Waves, Currents and Tides. Ocean currents are the regular movement of ocean water from one region to another. Ocean currents are of two types.

Warm currents: These currents originate and flow from the equatorial regions to sub-polar regions.

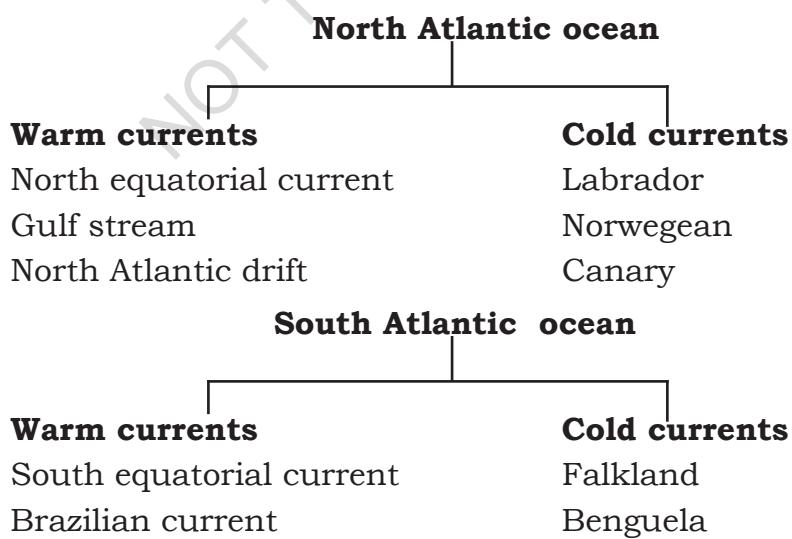
Cold currents: These currents originate in the polar regions and flow towards the equatorial region.

Factors that influence ocean currents are Rotation of the Earth, Temperature, Wind, Salinity, Shape of the landmasses, etc.

Currents of the Pacific Ocean are:



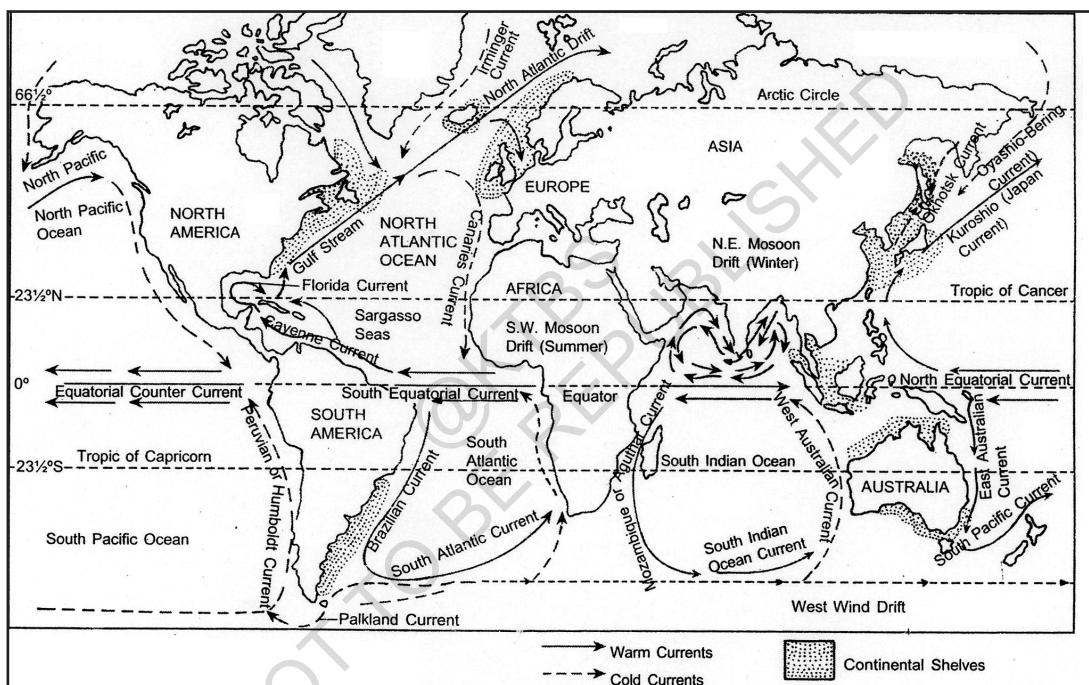
Currents of the Atlantic ocean are:



Current of the Indian ocean:

The north Indian ocean currents change their direction seasonally following the monsoons. During the south west monsoon the currents flow in a south west to north east direction and during the north east monsoon they flow in a north east to south west direction.

The south Indian ocean currents are Mozambique, Madagascar, Agulhas as warm currents and West Australian as cold current.



Major ocean currents of the world

Facts file : Major fishing grounds

- 1) Honshu Hokkaido fishing grounds – meeting place of Kuroshio warm current and Oyashio cold currents(Japan).
2. Grand bank – meeting place of Gulf stream warm current and Labrador cold currents (New Foundland USA).
- 3) Dogger bank – North sea region of Europe.

TIDES: types, causes and uses:

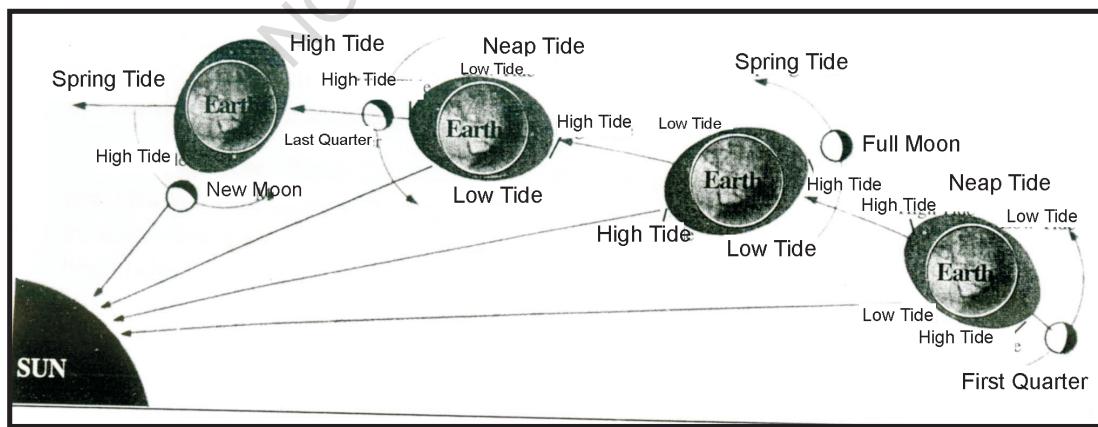
Tides are the periodic rise and fall in the sea or ocean level. They occur due to, gravitational attraction by the moon, gravitational force by the sun, rotation of the earth and, centrifugal force of the earth.

Types: Tides are of two types. High tide, also known as Flood tide and Low tide, also known as Ebb tide. On the water bodies of the earth there are alternate high tides and low tides. Between one high tide and a low tide the time is 6 hrs, 13 minutes. Between one high tide and another, the timegap is 12 hrs, 26 minutes. In 24 hrs, 52 minutes there are 2 high tides and 2 low tides.

There are two types of tides on the basis of the positions of the Moon and the Sun.

Spring tide: Spring tides take place when the earth, the moon and the sun are in the same straight line, eg., New moon and Full moon. When the spring tides take place, high tides are the highest and low tides are the lowest.

Neap Tide: Neap tides occur on the first quarter and last quarter days in the phase of the Moon. During neap tides the sun and the earth are in the same straight line and moon is in right angle to the earth. In this type of tides the high tides are not very high and low tides are not very low.



Spring Tides and Neap Tides

Uses : Tides are directly and indirectly useful to mankind in following ways.

1. It helps navigation.
2. Helps in the location of ports and harbours.
3. Tides help to keep the harbours clean.
4. They help fishing.
5. They also help to generate energy in the form of tidal energy.

Conservation of Oceans: Conservation of oceans is very important. Oceans help us in many ways and they are the habitat of millions of marine organisms. Considering the rate at which the oceans are being contaminated, they may not remain what they should be in the future.

The following are the important methods of conservation of oceans.

1. Oil transportation should be done through pipelines.
2. Nuclear waste should not be dumped into the sea or ocean.
3. Petro-chemical industries in the coastal regions must avoid dumping effluents into the sea or ocean.
4. Dumping of any waste near the ports and harbours must be controlled.
5. Ore deposition and mineral exploitation along the coast must be controlled.
6. Exploitation and destruction of beaches must be controlled.

Exercises

I Fill in the blanks with suitable words:

- 1 The average depth of the continental shelf is _____.
- 2 One fathom is equal to _____ ft.
- 3 The deepest place in the Pacific ocean is _____.
- 4 The average salinity of the ocean water is _____.
- 5 _____ tides occur during full moon.

II Answer the following questions:

- 1 What is hydrosphere?
- 2 Mention the four major parts of the ocean floor.
- 3 State the difference between ocean currents and tides.
- 4 Distinguish between spring tide and neap tide.
- 5 How can we conserve the oceans?

III Match the following:

A	B
1. fathom	a) deep sea plain
2. oyashio	b) eastern coast of USA
3. gulf stream	c) cold current
4. sea mounts	d) Indian ocean current
5. agulhas current	e) depth of ocean

IV Define the following:

1. continental shelf	4. high tide and Low tide
2. salinity	5. benguela current
3. warm and Cold currents	6. tides

V Terms to remember:

1. gulf stream	4. kuroshio current
2. salinity	5. flood tides
3. warm currents	6. tidal energy

VI Activity :

1. List out the cold and warm currents in Atlantic ocean.

CHAPTER – 5

BIOSPHERE

After studying this chapter you learn:

- the meaning of biosphere and its Importance.
- about the meaning of environment, environmental pollution, types of pollution and preventive measures.

Do you know, what the Earth has given to us? But what are we giving back to the earth ?

Meaning : Earth is the only planet which has various forms of life on it. Biosphere is the part of the earth where life exists. The biosphere is the fourth component of the earth and it is the totality of all living things on earth.

Ecology: Ecology is the study of the interaction of living organisms with their physical, chemical and biological environment. In a natural environment, there is a perfect balance between the various organisms living together in the biosphere. This is known as ecological balance.

Ecosystem is a community of plants and animals, together with their immediate environment, including the inanimate part of that environment. It is also defined as ‘the total assemblage of components entering into the interactions of a group of organisms’.

Without ecosystem or ecological balance in the biosphere one cannot imagine the existence of plants, animals and micro organisms either single or in community. Every organism adjusts itself with its physical habitat.

Environment: Environment is the surrounding where an organism, a community or an object exists. It creates favourable conditions for the existence and development of all living organisms. The environment is of two types- Natural or geographical and Cultural or man-made.

Environmental pollution: Environmental pollution is the unfavourable alteration of our surrounding, wholly or partly by human action through direct and indirect effects.

Environmental pollution is one of the most terrifying ecological crisis of today. The factors like over population, industrialization, urbanization, over exploitation of resources, over utilization of automobiles, etc. have influenced a change in the living conditions of plants, animals and human beings.

Pollutants are the substances that cause pollution. Pollutants are natural and man-made. The man-made pollutants are considered to be more dangerous and hazardous than natural pollutants. The pollutants may be visible like smoke, gases, dust, garbage, sewage, etc., and invisible like bacteria, toxic chemicals mixed with water, food, soil, etc.

Types of Pollution: Environmental pollution are of different types. On the basis of pollutants and medium of pollution they can be classified into the following types: Air pollution, Water pollution, Soil pollution and Noise pollution.

1. Air pollution

According to World Health Organisation (W.H.O) ., air pollution is defined as, 'Substances put into the air by the activity of mankind in concentration, sufficient to cause harmful effects to his health, vegetation and property'. The important sources of air pollutants are, **Natural**: Volcanoes, forest fire, cosmic dust, etc. **Man-made**: Gases from industries, domestic use, automobiles, mining, nuclear power plants, nuclear explosions, etc.

The important pollutants are : Carbon dioxide, carbon monoxide, sulphur dioxide, nitrogen oxides, chlorofluorocarbons (CFC), hydrocarbons etc. The important effects are change in weather and climatic conditions, ozone depletion, greenhouse effect, global warming, effect on human health, problem with respiratory system, effect on life of animals and plants.

Measures to control air pollution are : Control of gaseous pollutants, control of emission from automobiles, planting of more trees, use of non-conventional energy sources, awareness programme, legal control, literacy and education etc.

2. Water pollution

Water pollution is 'alteration in physical, chemical and biological characteristics of water which may have harmful effects on human and aquatic life'. The important sources of water pollution are **Natural**:

Soil erosion, landslides, volcanic eruption, decay and decomposition of plants and animals etc. **Man-made:** Industrial effluents, urban waste, domestic waste, agricultural waste, thermal waste, oil spill, offshore drilling, nuclear waste etc. Water pollution is of different types: Sea or Ocean water pollution, Ground water pollution, River water pollution, Lake pollution etc.

The important effects of water pollution are: It spreads water-borne diseases and epidemics like cholera, typhoid, diarrhea, jaundice, etc, Causes death of aquatic life, affects irrigation water and on agricultural crops, nature and features of water etc.

Measures to control water pollution: Industrial effluents must be treated; drinking water sources must be kept clean; sewage treatment plants, disposal of waste on the water bodies must be controlled, etc.

3. Soil pollution

Soil pollution is 'decrease in the quality of soils either due to human sources or natural sources or by both'. It results in the increase of soil erosion, lack of humus, decrease in soil micro-organisms, plant nutrients etc. Sources of soil pollution are, industrial and mining waste, Domestic and urban waste, agricultural waste, nuclear waste etc.

Effects of soil pollution are: it decreases the fertility of the soil, converts the region into wasteland, destroys the micro organisms in the soil etc.

Measures to control soil pollution: Controlled and judicious use of chemical fertilizers, pesticides and insecticides, proper disposal of industrial and urban waste, proper use of land and crop management, awareness programme on proper soil utilization and its maintenance etc.

4. Noise pollution

Noise pollution is 'any undesirable sound dumped into the atmosphere leading to health hazards'. The important sources of noise pollution are **Natural:** Thunder, cyclones, heavy rainfall, hailstorms, waterfalls, ocean waves etc. **Man-made:** Industrial noise, automobiles, air crafts, domestic noise, mining etc.

Effects of noise pollution are: noise pollution causes temporary or permanent hearing problem, headaches, restlessness, cardiovascular diseases, Psychological disorder, behavioural changes, lack of concentration, etc.

Measures to control noise pollution: Industries must be located away from the residential areas; construction of sound proof walls in the factories, restricting unnecessary use of sirens, horns and loud speakers; airports must be located away from the residential zones; protective instruments the workers in the industries, noise producing vehicles must be checked etc.

Global warming : The temperature of the earth is increasing slowly over the years. For the last few years global temperature has increased. This phenomenon is termed as Global warming. The warming of atmosphere is caused by greenhouse effect and trapping of heat by the atmosphere. The world getting warmer, climatic zones are shifting, glaciers are melting and sea level is rising due to global warming eg., high rate of melting of ice in Himalayas, Arctic and Antarctic regions.

Greenhouse effect : The energy that the earth receives from the sun has to be balanced by the radiation emitted from the earth's surface. The use of fossil fuels is increasing greenhouse gases in the atmosphere. Carbon dioxide and other greenhouse gases trap the heat radiated from the earth. Thus increasing of greenhouse gases is causing an increase of temperature. This is called 'Greenhouse effect'.

Ozone depletion : Ozone is a thin layer of gas found in stratosphere. Ozone absorbs ultraviolet rays and protects all forms of life on the earth's surface. In recent years the use of air conditioners, refrigerators, sprays and deodorants are destroying the ozone due to the synthetic chemicals released into the atmosphere, primarily 'chlorofluorocarbons' (CFC). The highest ozone depletion in the world is recorded in the atmosphere over Antarctica. The ozone depletion has caused the ozone hole. This has to be controlled for the sake of the people of the present and future generation.

Acid rain : Acid rain contains high amounts of acids particularly sulphuric acid and carbon monoxide. It is caused when the rain drops pass through the polluted atmosphere. The rainfall with poisonous acids kill marine organisms. Acid rain is damaging forests, agricultural crops, old buildings, monuments etc.

Acid rain is also referred to as 'lake killer'. The 'Black Triangle' stretching over Poland, Czech Republic and South-east Germany is one of the worst acid rain affected regions in the world.

Bio-Diversity : The variety of flora (plants) and fauna (animals) in a region is known as biodiversity. Distribution of different kinds of plant and animal species in a region shows the richness of biodiversity. The maintenance of biodiversity is very important both for the quality of environment and also for human survival.

The conservation of 'Biodiversity' is very important to save and protect rare plants and animal species. Providing good environmental condition for their living is the best means of protection.

The earth is the only living planet in our solar system. The way in which changes, disturbances, hazards are taking place on the earth, can lead to the destruction of the quality of life on our earth in the near future.

To 'Save Earth' and 'Mother Planet' we must educate people, formulate awareness programmes, utilize resources judiciously, control pollution awareness through education, symposiums, seminars, skits, films, summits. These necessary to save our "MOTHER EARTH".



"Save Earth", "Save Mother Planet"

Exercises

I Answer the following questions:

- 1 What is Biosphere?
- 2 Define ecology.
- 3 Name the different types of environmental pollution.
- 4 What are the measures to control water pollution?
- 5 What is Bio-diversity ?

II Define the following :

- 1 Biosphere
- 2 Ecological imbalance
- 3 Global warming
- 4 Greenhouse effect
- 5 Ozone depletion
6. Acid rain

III Terms to remember:

1. Pollution
2. Environmental Day
3. Climate change
4. Chlorofluorocarbons (CFC)
5. Earth Hour and Earth Day
6. 'Save Earth'

IV Activity:

1. Collect information on the impact of global warming. Also enlist the ways of controlling global warming.

ECONOMICS

CHAPTER-1

MEANING AND IMPORTANCE OF ECONOMICS

After studying this chapter you would :

- know the importance of consumers, sellers, producers, service providers in economics.
- know the importance of studying economics.
- be able to define-economic activities, production and factors of production.

Meaning of Economics

Everyday we make use of a variety of goods and services, and thereby, satisfy our needs. We eat food, wear clothes, and use different kinds of goods like pens, pencils, bicycles, T.V. and mobiles. We make use of services of teachers to learn to read and write, and the services of doctors when we are ill. In the same manner, everybody around us makes use of goods and services. Such people are called Consumers.

The goods that we use are not available to us free of cost. We have to pay money for them. The people who obtain the goods from the producers and sell them to the consumers, are called Sellers.

Farmers grow food grains, fruits and vegetables. The cobbler make shoes for us. A goldsmith prepares gold ornaments. A tailor stitches clothes for us. Owners of factories manufacture a variety of goods. All these people are called Producers.

Many agricultural workers work in the fields. Many people work in hotels, business and commercial centres, information and technology companies and various other organisations for wages. These people are called Labourers.

We make use of buses, trains, boats, ships and aeroplanes to transport people and goods from one place to another. The electric company supplies electricity to everyone. The telephone company provides telephone, mobile and internet services. They have to be given money for such services. The people who provide such services are called Service Providers.

Observe the situations given above. Consumers pay money and buy the goods and services they need. Sellers, producers, labourers and service providers engage in profitable businesses. Thus, all the activities that man engages in to earn money and to utilize money are called economic activities. Economics is a subject which studies the daily economic activities of man.

Indians, from ancient times, have given importance to the study of man's economic activities. Detailed information is available in the Manusmruti about farming, industry, tax, revenue and other economic issues. Kautilya, who lived during the Mauryan period, wrote a book called Arthashastra. This gives detailed explanation of not only political administration but also financial management and general economic system.

*The word '**Economics**' originates from the two Greek root words **okos** and **nomos**. **Okos** means 'a house' and **nomos** means 'management'. Thus the word '**Economics**' means making good use of the resources in order to bring happiness and satisfaction to all the members of the family. Over the years, the scope of Economics has widened to national and international levels.*

The subject matter of Economics has been changing from time to time. The Father of Economics, **Adam Smith**, who lived in the 18th century, has said, "Economics is the study of Wealth."

The Importance of the Study of Economics

There is a financial aspect influencing most of the activities of man. Economics helps us in many ways in our lives. Every citizen should have knowledge of economics. The points mentioned below bring out the importance of the study of economics:

- Economics helps us to understand poverty, unemployment, economic inequality and other related problems that we get to see around us, and to find solutions for those problems.
- When we attempt to satisfy our unlimited wants through our limited income, problems of choice crop up. Economics enables us to find solutions in such situations.
- When producers want to create goods and services, they are faced with questions like – what to produce? How to produce? Whom to produce for? At what price to produce? Knowledge of economics guides them on such occasions.

- Economics identifies the reasons for the rise and fall of prices, and the results of such fluctuations. It provides ideas to bring stability in prices.
- Land, water, forests, minerals and other natural resources are limited in quantity. Economics suggests ways to make use of these limited resources with care and efficiency, and also pass them on to the next generation.

In this manner, Economics is very helpful in our daily lives. Thus, the study of Economics is not only enlightening but also profitable.

Study of Economics is not only enlightening but also profitable.

- A.C.Pigou

Economic Activities

We have seen that human wants are unlimited. Goods and services have the capacity to satisfy our wants. This quality is called 'Utility'. For eg - We eat food when we feel hungry. Food has the power to satisfy our need. We want to drink water when thirsty. Water has the power to quench our thirst.

Wants are the basis for all economic activities

Many of the goods and services that we use everyday are in limited supply, and hence are not available free of cost. We have to pay money to get them. These goods and services are called economic goods and services. Then how do we get money? We will have to do some work in order to earn money. Man makes use of his skills and labour to earn money, and satisfies his wants by utilizing that money. In order to earn money and wealth, and thereby satisfy his wants, man engages himself in various activities. These activities are called economic activities.

The most important objective of economic activities is to satisfy human wants. In every society, economic activities are bound by certain rules and traditions. Man's economic activities can be classified into four different kinds:

1. Production Activities : Production activities are those that produce goods and services. For ex: Agriculture, Animal Husbandry, Fishing, Mining, Forest Development, different kinds of industries, Transport, Communication etc.

2. Consumption Activities : Goods and services are produced for consumption. Man satisfies his wants by buying goods and services. All these activities are known as consumption activities.

3. Exchange Activities : The producers produce goods for the consumers. There is a marketing system to supply the produced goods to the consumers. In this system, activities of collection of goods, transportation, selling and buying take place.

4. Distribution Activities : The income that is earned through the production of goods has to be distributed to the various factors of production that have enabled the production. This process involves activities undertaken to determine the price of the factors of production. Steps have to be taken to ensure that the income earned is distributed among all factors in a just manner.

Man is not engaged only in economic activities in his daily life. He engages himself in many activities like social, cultural, political, educational and religious activities too. Sometimes many activities which are not economic in nature become economic activities. For ex: when a teacher gives free tuitions at home to students, it is not an economic activity. When the same teacher charges fees for giving tuitions, it becomes an economic activity.

Production

Nature has provided land, water, forests, minerals, fuel, animals and many other resources. Man has learnt to utilize these natural resources and produce whatever goods he wants. This process is called production. He makes use of land and water to grow food grains, cotton, sugarcane etc. He rears animals and gets milk, meat, wool etc. from them. He collects many things from the forests. He digs out minerals from the land. In this way, the goods got directly from nature are called Primary goods.

Many primary goods cannot be consumed directly. Man has learnt to change the form of the primary goods and produce a variety of goods in such a way that his wants are satisfied. For ex: he weaves thread from cotton, cloth from thread, and different kinds of clothes from cloth. As the form of the primary good is changed, its utility increases and so does its price.

In the same way, jaggery and sugar are manufactured from sugarcane. Furniture from the wood of trees and different kinds of metals from ores are produced. In this way, the goods which are manufactured by changing the form of the primary goods are called Manufactured goods.

Man produces not only goods but also services for the satisfaction of his wants. Thus, production involves the production of services too along with production of primary and manufactured goods.

Factors of Production

The main objective of production is satisfying human wants through the production and supply of necessary goods and services. The inputs needed to produce goods and services are called Factors of Production. The factors of production are four. They are:

1. Land
2. Labour
3. Physical Capital
4. Human Capital

1. Land : In economics, the word 'land' refers to the land comprising barren land, water, forest, minerals and other natural resources. Land is limited in the sense that we cannot increase its quantity as we desire. Man has to produce the goods and services utilizing this limited land.

Even the land that can be utilized for farming is limited. Man has to grow all the necessary food grains on this land itself. Agriculture in India depends largely on rain. Therefore, only one crop can be grown during the rainy season on this land. But more than one crop can be grown on land that has irrigation facility. This is called Multicrop Practice. If dependence on rain is reduced and irrigation facility is extended to all agricultural land, agricultural production can be increased.

Vast areas of land are necessary for development of industries. In recent times, agricultural land is being utilized for the establishment of industries. Land is also necessary for expansion of towns and cities, development of roads and railway tracks, airports, communication facilities, educational institutions, hospitals and other developmental activities.

2. Labour : The factor that is most important for production after land is Labour. People who work are called Labourers. Labourers provide their hard work in return for money. Thus, the physical and intellectual work done in return for money is called labour.

Farmers, agricultural labourers, industrial workers and workers at hotels, garages and various transport organizations exert their physical energy. The labour they provide is called physical labour.

Some people work as clerks, officers, teachers in schools and colleges, doctors, lawyers etc. The labour they provide is called 'intellectual labour'.

Whatever kind the labourers might be, if they are treated with humanity, more labour can be extracted from them. Agricultural labourers, and workers at small scale industries, hotels, garages etc. work on the basis of daily wages. The wages of such daily wage earners are very less, and such workers lead lives in poverty. The Government has brought into force a Minimum Wages Act, and announces from time to time, the minimum wages that should be given to such workers. At present, the daily wage earners cannot be given wages below the minimum fixed for them.

3. Physical Capital: All kinds of manufactured goods that are used in production are called Physical capital. Machines, tools and equipment, buildings, railways and roadways, ports, airports, electric power stations etc. comprise Physical capital. Money is needed to buy or construct all of these. The money that is utilized in production is called Capital.

From ancient times, implements like plough, hoe, rake etc. are being used in agriculture. But modern farmers are making use of advanced agricultural equipments like tractors, tillers, pump sets etc. In the same manner, advanced machines and equipments are being used in industries. Due to this, today it is possible to produce goods of superior quality at low cost.

The Government encourages establishment of factories, power stations, different kinds of transport and communication systems, public buildings, hospitals, schools, colleges etc. This is called Capital formation. When Capital formation increases, production increases. The capital that is needed for this is collected from people's savings.

4. Human Capital: Human capital is very important in the modern production system. The people who have the knowledge to gather the land, labour and Physical capital, and put them into production, are called 'human capital'. Such people are known by different names as Organizers, Promoters, Entrepreneurs and Pioneers. Today production happens on a very large scale, and human capital has acquired the greatest significance among all the factors of production.

Goods and services in produce are produced with help of factors of production. Revenue comes through the selling of produced goods and Services. This revenue is distributed among the factors of production, in the form of returns like rent for land, wage for labour, interest for physical capital and profit for human capital.

Exercises

I Fill in the blanks with suitable words:

- 1 The word 'Economics' originates from the Greek root words _____ and _____.
- 2 Kautilya who was in the Mauryan court, wrote the book _____.
- 3 The quality of the goods and services which can satisfy man's wants is called _____.
- 4 The physical and intellectual work that is done in return for money is called _____.
- 5 The manufactured goods that are used in the production process are called _____.

II Answer the following in a sentence each:

- 1 What is Economics?
- 2 Who is identified as the 'Father of Economics'?
- 3 What are Economic Activities?
- 4 A student buys a pen and writes with it. What kind of economic activity is this?
- 5 What is 'Production'?

III Answer the following in three or four sentences each:

- 1 What are man's economic activities?
- 2 Why do we need to study Economics?
- 3 How has the meaning of Economics changed from time to time?
- 4 What is meant by 'Factors of Production'? What are they?
- 5 What is 'physical capital'? Identify them.

IV Suggested Activities:

- 1 List the economic activities the members of your family are engaged in.
- 2 Identify the various economic activities of the people around you or your village are engaged in.
- 3 List the goods that you consume everyday.
- 4 Observe how farmers decide to grow and how do they decide to grow.
- 5 Imagine if a farmer can grow paddy in his one acre land, list out the things he may need.

CHAPTER – 2

NATURAL RESOURCES

After studying this chapter you would be able to :

- explain the importance of natural resources.
- differentiate between renewable and non-renewable sources.
- explain the conservation of resources.
- explain the consequences of 'deforestation' and 'desertification'.
- know the concept of carrying capacity of the earth.
- analyse the census and effects atmosphere changes.

Land, air, water, forests, soil, minerals etc. are very helpful to our lives. Nature has provided all these freely to us. The resources that Nature has given us are called 'Natural Resources'. Sunlight, Coal available underground and Petroleum too, are natural resources.

Man's life depends on natural resources. His economic activities have evolved depending on the natural resources. Pleasant weather, fertile soil and abundant water enable agricultural development; mineral resources provide the raw material and fuel necessary for industrial development. Forest resources not only provide timber and other products needed by man but also regulate the atmosphere.

Water helps in agricultural irrigation, production of electricity, industrial development and domestic consumption. In this manner, natural resources occupy great importance in man's life. The survival of man depends on nature's survival.

Scarcity of Resources

Land and all natural resources on it are constant in the sense that we cannot increase their quantity according to our needs. Man has to satisfy his wants utilizing the natural resources available. In other words, our ever-increasing wants have to be satisfied by limited natural resources.

Air is a mixture of many gases. Nitrogen forms 78% and oxygen forms 21 % of air. In addition to these, carbon dioxide, hydrogen and other gases are also present to a small extent. Respiration of living beings, photosynthesis of plants and other natural processes preserve

the balance of the gases in the air. But since petroleum, coal and other mineral fuels are being used to a great extent, carbon dioxide and other harmful gases that are released into the air pollute the air. Pure air is becoming very rare in cities.

Though water covers more than 70% of land, 97% of it is found in oceans and thus cannot be used. Only 3% of the water found on land is pure enough to be consumed. 2.3% of this pure water is collected in the form of ice in the polar regions and high mountainous peaks. Approximately 0.66% of the water is found as underground water and is collected beneath the earth's surface. Only around 0.03% of the water is available on the land surface in the form of rivers, streams, lakes, tanks and ponds. The most important source of water on land is rain. The water that is available on the surface of land and underground is all the water resource that is available for our use.

Various types of minerals and mineral fuels are available in the earth. These get depleted when they are taken out of the earth crust and consumed. For example: Gold ore is no longer available in the Kolar Gold Mines and mining has been stopped there.

Forests not only regulate the atmosphere, but also bring rain. They provide shelter to thousands of living organisms. They also give timber, firewood and other products. But man is exploiting forests selfishly for his requirements, without giving attention to developing the forests. He is killing many animals for the sake of food, skin, tusks etc. Everyday many living organisms are being destroyed. This is the reason why the forest area is getting reduced steadily.

Renewable And Non-Renewable Resources

Natural resources can be mainly classified into two groups. They are:

1. Renewable resources
2. Non-renewable resources

Renewable resources : Some natural resources go on getting replenished as we use them. These resources are called non-exhaustible resources. Nature, through its natural processes, goes on replenishing them. They are also called renewable resources. Water, land, forests, air, sunlight and heat are some of the renewable resources.

Water is a precious natural gift. Lakes, tanks, ponds, streams, rivers and wells are the sources of water. Though the quantity of water in these gets reduced due to human consumption, nature refills them in the form of rain.

Land is considered the most important wealth. It provides shelter to man and millions of living organisms. Man's economic activities, residence, farming, industry, commerce, transport etc. get developed according to the geographical features of land. The fertility of land gets reduced by rain, floods, winds and excessive use of chemicals.

Forests provide food and shelter to man and all birds and animals. They preserve the balance between oxygen and carbon dioxide in the atmosphere. However, as civilization expands, more and more forests are getting destroyed. But they can be grown again, if man tries to do so.

Air is also a precious renewable wealth. It is essential for the survival of living beings. It is because of the existence of air that water vapour gets collected and brings rain. It is our responsibility to protect the air from getting polluted. In the same manner, sunlight is also a renewable resource, and it is possible to produce a great amount of pollution-free electricity.

Non-renewable resources: Some natural resources get depleted as we go on using them. Eventually they get dried up too, and cannot be created again. These resources are known as exhaustible resources. Minerals like Iron ore, copper, gold, manganese, bauxite etc., mineral fuels like coal, petroleum, natural gas, Uranium, Thorium etc., resources which get depleted and cannot be renewed. Nature cannot replenish them through its processes and so they are also known as non-renewable resources.

Since minerals and mineral fuels are non-renewable resources, they have to be used with great care and planning. Once they get depleted, they will not be available for our use again. Our future generations will be deprived of their use. Hence they have to be utilized systematically and in a limited manner, and save them for the future generations. In this manner, balance in nature has to be preserved along with achieving economic development.

Deforestation and Desertification

Deforestation : Forests are very significant resources for man. Forests which are helpful to man in innumerable ways, are being destroyed by various activities of man. Right from ancient times, man's life has been intertwined with the existence of forests. Approximately 11,000 years ago, human beings began to settle down in different places and engage in farming. From that time onwards, man has been destroying forests for purposes of agriculture and establishment of towns and villages. Since this was on a very small scale, the destruction did not affect the forests much. But the Industrial Revolution that took place around three hundred years ago has resulted in an excessive use of forest resources. The ever-increasing urbanization, industrialization, mining and expansion of agricultural land have also led to trees being cut mercilessly and entire forests being destroyed. Consequently, environment-related problems of great proportions are being created.



Picture of Deforestation

Consequences of deforestation

: Forests are intimately related to regulation of the weather, diversity of life forms, birds and animals, crops, medicinal plants and others. Vast deforestation results in many bad effects on the environment. Prominent among them are:

- There is increased soil erosion due to deforestation, and thus fertility of soil is destroyed.
- Production of oxygen in the atmosphere gets reduced, and level of carbon dioxide increases.
- When forests get destroyed, the availability of forest produce gets reduced. Due to this, the industries which depend on only forest goods, suffer.
- With the destruction of forests, the habitat of innumerable living organisms will be destroyed.
- The amount of rainfall gets reduced, and thereby the source of man's food itself dries up.
- Deforestation is also responsible for global warming.

Desertification : The destruction of forests and living beings on earth leads to the creation of deserts. This is called desertification. As the forest cover consisting of trees and plants gets destroyed, high velocity winds and heavy rains cause soil erosion. Intensive cultivation and excessive use of chemicals destroy the innate quality of soil. Due to destruction of forests, amount of rainfall gets reduced. As a result of all this, desertification takes place. Desertification is the reason for the loss of fertility of the soil and the deterioration of quality of land.

As forests are getting destroyed, the amount of rainfall is getting decreased year by year, and the ground water table is drying up. There are frequent droughts. Summers are becoming hotter and hotter every year, and getting water to drink is becoming difficult. Today more than 80 countries in the world are facing scarcity of drinking water. Scientists at Chicago University, United States of America, predict that if the present situation continues, within the next 20 – 25 years, more than 50 countries in the world will be completely devoid of water, and turn into deserts. What is of concern is the fact that India is one among these 50 countries. Already around 1.5 lakh villages and around 1.25 lakh suburbs in cities are suffering due to scarcity of water. The situation in Karnataka is no different from this. If deforestation continues at the rate it is being done here, the opinion of experts that Karnataka will emerge as a very vast desert in India within a few years, will be definitely proved true.

Environment is hunted down by civilisation; and civilisation is followed by desertification.

Carrying capacity and Climate Change

Carrying capacity : Earth has carrying capacity. It is capable of enduring the pressure of population increase, deforestation, environmental pollution, depletion of ground water, excessive use of vehicles, etc. to a certain extent. This is called the Carrying capacity of earth. If the pressure exceeds, this carrying capacity gets reduced and destruction awaits man.

There is a close link between the innumerable species of animals, plants and man. It is essential to preserve the balance between these. When the numbers



Over Population

of animals, human beings and plants complement one another and all beings can live in peace, such a state is called ecological balance. But if there is an imbalance in the numbers of any of these categories of living beings, no being can ever live in peace.

Ecological imbalance takes place when there is an imbalance in the numbers of different kinds of living beings. If population grows in an unlimited manner and forests get reduced in area or mineral resources get depleted, there will be imbalance in the environment. Due to this imbalance, there will be scarcity of food grains, dearth of mineral resources, changes in the climate, lack of rainfall, scarcity of water and environmental pollution. The earth can endure such changes only up to a certain extent. But when they cross a particular limit, people will be subjected to great suffering and loss. Even animals and birds perish.

Climate change : As we are experiencing these days, extreme heat during summers and extreme cold during winters, drastic variations in the amount of rainfall during the rainy season, cyclones and other natural disasters are the direct result of climate change. These days there is lot of concern about global warming all over the world.

There are many factors responsible for the changes in the climate. Both human activities and natural factors influence the climate. Significant among them are:

1. Burning of fossil fuels and fire : Excessive use of fossil fuels like coal, petroleum, burning of firewood and forest fires during summers are the main reasons why poisonous gases like carbon dioxide, methane, sulphur dioxide, nitrogen oxide etc. get released into the atmosphere. These gases increase the heat in the atmosphere and cause variations in the climate.

2. Deforestation : Man has been foolishly destroying trees and forests, and this has spoilt the balance between oxygen and carbon dioxide. Due to this, the amount of oxygen in the atmosphere is getting reduced and the amount of carbon dioxide is increasing, thus increasing the heat.

3. Green House Effect : Gases like carbon dioxide, methane, chlorofluorocarbons, ozone and others get collected in the atmosphere and increase the temperature on the earth. These gases are called Green house gases. They trap the heat of the earth and cause global warming.

4. El Nino or Warm Oceanic Currents : Warm oceanic currents in south pacific ocean are called El Nino. These pass from the equator

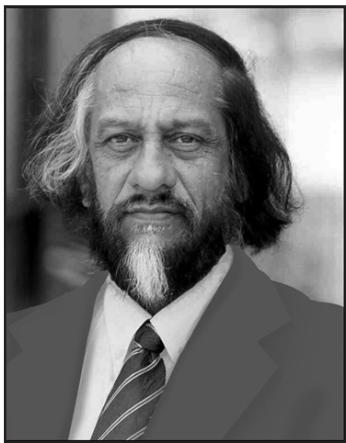
in the Pacific ocean towards the south. They cause excessive rain or severe drought in the areas around the Pacific ocean.

5. Excess use of grounds water : Because of excess use of ground water through bore wells, water sources on the earth dryup. So moisture in the air decreases and causes global warming.

Consequences of Climate Change : In 1995, Inter - Governmental Panel on Climatic Change (IPCC), a panel consisting of around 2000 scientists was formed to study the global temperature. This panel has studied the global temperature in detail and submitted its report. It has warned that escalation of global warming will threaten the survival of man. The scientists have predicted that by the end of the 21st century, the warmth of the earth will increase from 1.4°C to 5.8°C . The problems that could arise due to climate change are :

1. Due to global warming, the ice cap in the polar regions and the mountainous peaks will melt and raise the level of the sea. Consequently, many coastal towns and cities will be submerged.
2. When the heat in the atmosphere rises, more surface water gets evaporated. This will adversely affect sources of water, forests and other eco- systems, farming, production of electricity, tourism and human health.
3. When the amount of carbon dioxide increases in the atmosphere, heat waves arise. These are harmful to plant and animal species.
4. When the atmospheric temperature rises, the ice cap on the mountainous peaks, glaciers and icy lakes melt and increase the water of the rivers that take birth there. This causes floods in the river valleys and results in soil erosion. The heavily populated valleys of the Indus, the Ganga and the Brahmaputra suffer many problems due to frequent floods and soil erosion.
5. The rising temperature of the tropical zones spreads to polar regions, and causes oceanic currents and change in direction of the oceanic currents.
6. Marine life suffers due to the atmospheric change. There will be adverse effects on their feeding, reproductive activities and lifestyle.

In this manner, due to global warming, there are changes in the climate. Climatic changes have an adverse effect on the eco-system. Human life becomes intolerable.



The Indian scientist, R.K. Pachauri, led the international team of around 2000 scientists, "The Inter-governmental Panel on Climate Change" in the study of global warming. Recognizing this, he was awarded the Nobel prize in the year 2007.

R.K. Pachauri,

Prevention of climatic changes : If the ecosystem on the earth has to survive and the human life should continue eternally, climatic changes should be prevented. Prevention of climatic changes can be brought about by:

1. Afforestation and planting of trees in and around public places and agricultural land.
2. Conservation of the existing forests.
3. Reduction in the use of fossil fuels, and increase in the use of non-conventional sources of energy like wind power, solar power, biogas and bio-fuels.
4. Reduction of the emission of green - house gases through international support.

Recently, efforts are being made at the international level to reduce the emission of carbon dioxide and green-house gases. International agreements are being signed towards this goal. Most of the nations have arrived at a consensus to prevent the emission of poisonous gases within a specified time-frame. At the same time, more attention is being given to the use of non-conventional energy sources.

Exercises

I Fill in the blanks with suitable words:

- 1 In recent times, man has moved towards _____ development by controlling environmental pollution and conservation of nature.
- 2 The amount of pure water available on the surface of land for human use is _____.

- 3 Water is a renewable natural resource, but mineral oil is a _____.
- 4 Plants, by the process of photosynthesis, absorb atmospheric _____, and release _____.
- 5 If deforestation continues at the same pace, within a few years, _____ state will become the largest desert of our country.

II Answer the following in a sentence each:

- 1 What is meant by 'Natural Resources'?
- 2 What is the meaning of 'Desertification'.
- 3 What do you mean by 'Ecological Balance'?
- 4 Which are the gases identified as 'green-house gases'?
- 5 What is meant by the earth's 'carrying capacity'?
- 6 What is main reason for the depletion of underground water table?

III Answer the following in 5-6 sentences each :

- 1 How are the natural resources essential for human life?
- 2 'Plants are the atmospheric purification factories.' Explain.
- 3 What are renewable natural resources? List them.
- 4 What are the non-renewable natural resources? Why should they be used carefully?
- 5 List out the effects of climatic changes.

IV Suggested Activities :

- 1 Make a list of the natural resources around your place.
- 2 Identify the number of tube wells in your village. Find out how many of them have dried up and understand the reasons for their drying up.
- 3 Collect the pictures of Tsunami and Earthquake.

CHAPTER-3

HUMAN RESOURCES

After studying this chapter you would :

- know the meaning of human resource and importance.
- understand the concept of population growth in India, birth rate, sex ratio and population density.
- understand the role of population conversion in economics development.
- be able to discuss the measures to improve quality of life (reproduction, health and quality of population)

The people living in a village constitute the population of that village. In the same manner, the people living in a country constitute the population of that country. Like natural resources, the population of a country is the wealth of that country.

The population of a country consists of children, adults and senior citizen. Those under 14 years are considered children, those between 15 and 60 years are considered adults, and those above 60 are identified as senior citizens.

Adults are capable of working. They form the working people. The working people form the national wealth. The people with knowledge, skill and abilities form the human resource of that country. Since the population of adults is more in India, there is an increase in the workforce. Therefore population has been called an asset.

If good education, training and health facility measures are provided to human resources, they get transformed into human capital. They possess the capability to increase the national income and transform society.

If more investment is made on education and health of children, they will be able to earn more income in the future, and make valuable contributions to society. Therefore, governments work towards providing good education and health facilities to their citizens.

People as resources

We can observe around us that the working capability of healthy, educated and trained people is more. The nation's income increases due to this. That is the reason why educated and healthy, working people are considered as nation's human resource.

Human resource occupies greater importance in the production of goods and services than natural resources and material resources. Natural resources and material resources cannot produce goods and services on their own. Production becomes possible only when human intelligence and efforts are present. Human resource provides the knowledge and workforce needed for production.

The people who work in various jobs in the fields of agriculture, industry and service sectors are referred to as the workforce. Human resource provides the workforce essential for work. Human resource supplies healthy and intelligent young people to the armed forces who are engaged in protecting the country.

Human resource carries out new researches and provide better facilities to the people. Electricity, televisions, computers, mobiles and fast vehicles are all the contributions of human resource.

Till now, India's large population was being considered a burden. But after China's economic success, population is being viewed as a resource. It is possible to convert the people into a productive asset by providing good education, training and health facilities. However, it is better if the population of a country is within limits.

Know this

- *The number of poor people comes down with a rise in the number of literate people.*
- *As female literacy increases, birth rate decreases.*
- *Increase in farmers literacy leads to better agricultural production.*
- *The higher a person's education, the greater is his income.*

Population Growth

Observe India's population. It was 23.8 crores in 1901. In 2001 it increased to 102.7 crores. According to the 2011 census, India's population increased to 121.01 crores. This means that in a duration of 100 years, India's population has increased four times. About 17.3% of the world population lives in India. In terms of population, India ranks second to China. In recent times, every year around two crore people are getting added to Indian population, which means that, every year, an Australian continent is taking birth in India. The increase in population in this manner continuously over a period of time, is called population growth. In India, census is conducted every ten years, and the population increase in ten years' time is called 'decadal population growth'.

Population growth of India

Year of census	Number of people (in crores)	Average rate of annual growth (in percentage)
1951	36.1	1.26
1961	43.9	1.98
1971	54.8	2.20
1981	68.3	2.25
1991	84.3	2.14
2001	102.7	1.93
2011	121.01	1.70

Population growth rate

Ranganahalli a tiny village had 5000 population in 2001. In 2011 its population increased to 7000. Then calculate the growth rate of population.

$$\begin{aligned}
 Ans = gt &= \frac{Qt - Qt - 1}{Qt - 1} \times 100 & gt = \text{Growth rate} \\
 &= \frac{7000 - 5000}{5000} \times 100 & Qt = \text{present population} \\
 &= \frac{2000 \times 100}{5000} = 40\% & Qt-1 = \text{Before population.} \\
 & & \text{(Decadal growth rate)}
 \end{aligned}$$

Decadal growth rate is 40%

Rate of average growth of population = $40/10=4\%$

Usually population growth is expressed in terms of percentage. Growth expressed thus in percentage is called rate of growth. The rate of growth of population is calculated in two ways in terms of decadal growth rate and annual growth rate.

The rate of increase in the population that takes place every year is called the annual growth rate of population. The approximate annual growth rate is calculated by dividing the decadal growth rate by ten. According to the 2011 census, the annual growth rate of the Indian population is 1.7%.

The population growth of a particular country is determined by the birth rate and the death rate there. When the birth rate is more than the death rate, the population growth rate will be more. When both the birth rate and the death rate are equal, the population remains stable. If the death rate is more than the birth rate, the population decreases. In 2011, approximately there have been 22 births for every thousand people per year in India. This is India's crude birth rate. The number of babies being born per year per thousand people is called the crude birth rate.

Birth Rate

* In 2001 Ranganahalli had 5000 population. Among them 300 babies were born with in one year. Then what is the Crude birth rate of the village.

$$\text{Crude birth rate: } = \frac{300}{5000} \times 100 = 60$$

In 2001 Crude birth rate of Ranganahalli = 60.

* Among 5000 population of Ranganahalli, 100 members died with in one year. Then calculate the crude death rate.

The number of deaths that take place every year per thousand people is called the crude death rate. In 2011, India's crude death rate was 6. As education and health facilities improve, the crude birth and death rates come down. However, the crude birth rate reduces slowly whereas the crude death rate reduces rapidly.

Sex ratio

In 2011 Ranganahalli has 7000 population. Among them 3400 are female and 3600 are male. Then calculate the sex ratio.

$$\text{Sex Ratio} = \frac{\text{Female number}}{\text{Male number}} \times 100$$

$$= \frac{3400}{3600} \times 100 = 944$$

∴ Sex ratio of Ranganahalli in 2011 is 944

Biologically, it is essential for the numbers of men and women to be equal in a population. But in 2011, the number of women in India was 58.64 crores, whereas the number of men was 62.37 crores. This means that for every 1000 men, there were approximately 940 women. This is what is called the Indian sex ratio. There is a feeling even today that daughters are a burden to the family due to the practices of dowry and other reasons. The gender of the foetus is being detected during the mother's pregnancy itself, and female foetuses are being heartlessly killed. Deaths of female infants due to negligence have increased. Due to this, the sex ratio has come down. The mortality of female infants can be reduced significantly by providing suitable nourishment and care to pregnant mothers and infants.

The population density of a country is considered in order to understand the population pressure in that country. Population density is the average number of people living in an area of one square kilometer. Population density is calculated by dividing the total population of a country by the total land area. In 2011, density of population in India was 382. This is very high compared to other countries.

Density of population

Land area of Ranganahalli is 25 square K.M. Its population is 7000 in 2011. Then what is the density of population?

$$\begin{aligned}\text{Density of population} &= \frac{\text{Total Population}}{\text{Total land area}} \times 1000 \\ &= \frac{7000}{25} \times 280\end{aligned}$$

$$\text{Density of population in Ranganahalli} = 280$$

Demographic Transition

There is a close relationship between economic development and population growth. As the country achieves economic development, the population goes on reducing. The country's economic development passes through three stages. These stages are: backward stage, developing stage and developed stage. Population growth gets transition according to these stages of economic development.

1. Backward stage : When a country lags behind economically, there will be more poverty and unemployment in such a country. There are limited facilities for education or health. The people are superstitious and bound by customs and traditions. Due to this, both the birth rate and the death rate are high, and the population growth rate is also remains very low.

2. Developing stage: A backward country implements many measures in order to achieve economic growth. The government comes forward to provide education and health facilities to people. Epidemics are brought under control. Due to this, the death rate will decrease rapidly. However, the birth rate remains high, reducing very slowly. Hence, at this stage, since the birth rate remains high, and the death rate remains low, the population growth rate is high. At present, India is in this stage. That is the reason why the population growth rate is high here.

3. Developed stage: A developing country gets transformed into a developed country by intensifying its developmental activities. All the people get educated and well-informed. Everybody gets health and hygienic facilities. Therefore, at this stage, both the birth rate and the death rate remain very low, and the population growth rate is very low.

Thus, a backward country changes into a developing country by achieving economic growth, its population growth gets affected. Any country can control the population growth through economic development.

Remember

Backward country : *High birth rate and death rate, low population growth rate.*

Developing country : *High birth rate and low death rate, high population growth rate.*

Developed country : *Low birth rate and death rate, low population growth rate.*

Reproductive Health and Quality of Population

Health is one of the most important social infrastructure of man. Good health improves not only the quality of life of people but also the quality of their work. There is a popular saying, 'A healthy mind in a healthy body'. Therefore, if rapid economic development has to be achieved, the health of the people should be improved.

Reproduction is one of the main features of living beings. One living being gives birth to another being which is similar to itself. This is called reproduction. Good attention should be paid to the health and nutrition of a mother right from the day she becomes pregnant up to the day she delivers the baby. To enable this, well-equipped health infrastructures should be developed. Basic health infrastructure comprises hospitals, doctors, nurses, para-medical staff, beds, necessary medical equipment and well-developed pharmaceutical industries. All these should be made available to the people.

The National Health Policy of India aims to improve health care, family welfare and nutritional services for the people. It has paid greater attention to the health protection of the poor and tribal people. In the past six decades, it has attempted to provide comprehensive health facilities and thus improve the quality of people.

Due to these measures by the government, the health of the people has seen great improvement. The life expectancy rate is increasing. Infant mortality rate is decreasing. The rise in the life expectancy rate is a definite sign of the improvement in the quality of life of the people. Infant mortality rate is coming down due to measures like mother and child care, dietary supplements, protection of children from diseases etc.

Indicators of health

Certain criteria are used to understand the state of health of the people in a country. They are: Life Expectancy rate, Infant Mortality rate, Child Mortality rate, Maternal Mortality rate.

Life Expectancy Rate : *the approximate number of years every child is expected to live.*

Infant Mortality Rate : *the average number of infants death per thousand in a year*

Child Mortality Rate : *the average number of children out of the thousand that are born, which die within five years of birth*

Maternal Mortality Rate: *the average number of mothers out of one lakh, who die during childbirth*

Exercises

I Fill in the blanks with suitable words:

- 1 The working people who have knowledge, talent and skill are called the _____ of that country.
- 2 In 2011, the sex ratio was _____.
- 3 Census takes place once in _____ years in India.
- 4 The quality of population in a country depends on _____ and _____.
- 5 The average number of infants out of the thousand born, which die within a year of birth, is called _____.

6 In India, since the crude birth rate is high, and the crude death rate is _____, the population growth rate is high.

II Answer the following in a sentence each:

- 1 Who are the people identified as 'Working People'?
- 2 What is meant by 'Human Resources'?
- 3 What was India's population according to 2011 census?
- 4 What do you mean by 'crude birth rate'?
- 5 In 2011, India's Crude birth rate was 22 and crude death rate was 6. What is the crude population growth rate?
- 6 According to the 2011 census, what is the population density in India?
- 7 The population growth rate in developed nations is very low. Why?

III Answer the following in 5-6 sentences each:

- 1 What is Population Density? How is the population density of a country calculated?
- 2 Human Resources are considered the best among the factors of production. Why?
- 3 What is the role of health and education in developing human resources?
- 4 The population growth is more only in the developing countries. Why?
- 5 What measures do you suggest to improve the qualitative population?

IV Project work:

- 1 Visit a village and conduct the census.
- 2 Classify the sex and calculate the sex ratio.

CHAPTER-4

POVERTY AND HUNGER

After studying this chapter you would :

- identify the indicators of poverty.
- understand the extent of poverty in India.
- understand the features of poverty and hunger.
- be able to explain the procurement and public distribution system under food security system.
- understand the measures to eradication of poverty.

In order to lead his life, man needs sufficient food, clothes, a house to live in, medical facilities when afflicted by diseases, education and pure water to drink. These are called the fundamental needs of man. It is the duty of a civilized society to ensure that the fundamental needs of all people are fulfilled.

After independence, our national leaders vowed to eradicate problems like poverty, ignorance, illness, income inequality etc. As per their desire, the government initiated many developmental projects. Till now 11 five year plans have been implemented. The main purpose of all these have been to fulfil the fundamental needs of everyone and eradicate poverty. But unfortunately, even today over $\frac{1}{4}$ of the population is below the poverty line.

Who are 'poor'?

You must have observed life around you. Poverty is to be found both in urban and rural areas. In the cities, the sellers on the footpaths, daily wage workers, beggars, the workers working in small scale industries, nomads etc., are considered poor.

In the rural areas, the agricultural labourers who work in other's fields since they do not have any of their own, the small and the very small farmers with tiny patches of land, people engaged in occupations other than agriculture like basket weavers, potters, blacksmiths etc. live in poverty.

The main features of a poor man's life are hunger and poverty. The poor people are not able to get two square meals a day. They suffer

from malnutrition. They do not have means to care about their health, and suffer from illnesses. They do not possess any skills due to lack of education and training. Therefore, their chances of employment are few and the jobs they have will not be permanent.

Usually poor people live in mud houses. These houses have walls and roofs built of mud, coconut leaves and grass. Very poor people may not have even this kind of a house. They live in small tents or huts made of tin sheets on the roadsides or under the trees. The area in cities where such people live, are called slums. Thus, the condition in which people are deprived of their fundamental needs like food, clothing, shelter, education and health is called poverty.

Indicators of Poverty

Poverty is the enemy of the human race. It is in different forms. Complete eradication of poverty is our goal. To clearly identify poverty, we have to formulate specific yardsticks. Before independence, one of the founding fathers of India, Dadabhai Naoroji, brought into use, for the first time, the poverty line to identify the poor. Even after independence, the poverty line has been used as the main yardstick to measure poverty. Poverty line is the yardstick used to differentiate between the poor and the non-poor. At present, depending on the per capita consumption of food, the poverty line is fixed. An individual's food consumption is measured in terms of calories. In cities, an individual's daily average requirement is 2100 calories, whereas it is 2400 calories in villages. This is poverty line. People unable to earn this minimum requirement of calories are identified as people below the poverty line, or the poor.

Food is not the only requirement for man is survival. He has to be healthy, so needs good nutritious food. He should be knowledgeable enough to utilise the natural resources properly. In addition, he should have the freedom to participate in social, cultural and political activities of the community. When such improvements are brought in the lives of all the poor, poverty will be eradicated.

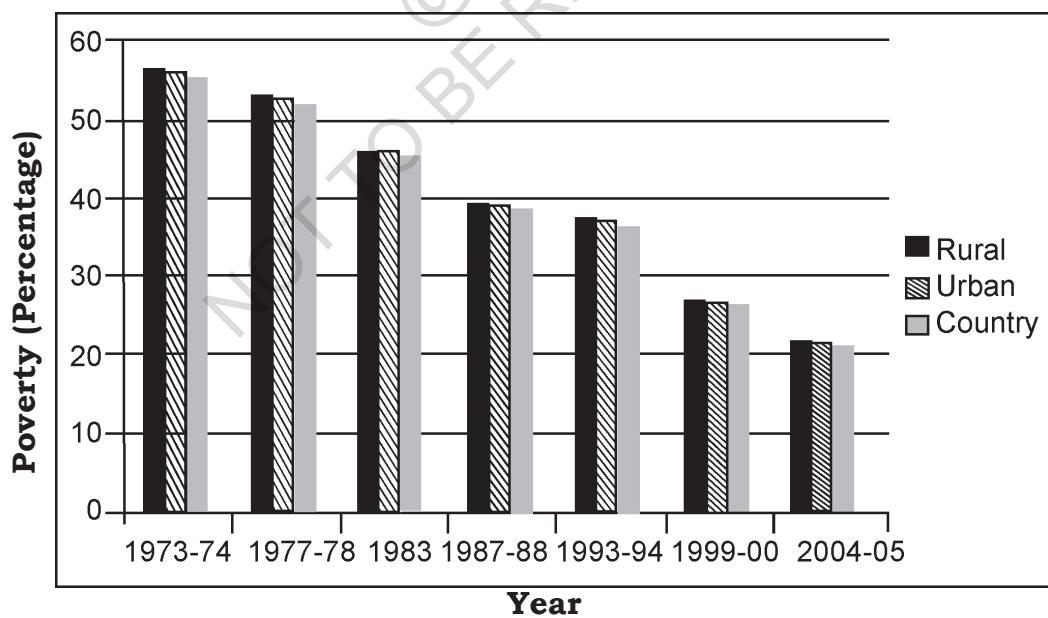
Towards this end, sociologists have attempted to identify poverty through indicators other than income and consumption of food. Those indicators are: level of illiteracy, amount of malnutrition, lack of health care, dearth of employment opportunities, unavailability of hygiene etc. Nowadays, factors of social ostracization and handicaps of various types are also being considered while determining poverty.

According to the economists of developed Western nations, most of the people are poor in the South-Asian countries of India, Pakistan and Bangladesh. They point to the lack of luxurious life or the fundamental requirements which are present in the Western countries. However, most of the Indians belonging to the farming community, or those identified as 'poor' people, do not consider themselves poor. We can see the simplicity of life and thought that Gandhiji often referred to, in most of the Indians. We can see that just as Indians give importance to materialism, they value spirituality too. In this context, if Indian poverty is studied in a manner different from the study of the Westerns', a totally different picture will appear.

At the international level, the World Bank identifies the person who spends less than \$1.25 on his daily consumption as being below the poverty line, i.e., poor. According to this criterion, in India, at present nearly 41.6% of the people are poor.

In India, the planning commission studies the population below the poverty line and the level of poverty from time to time and releases the facts and figures relating to it. This information can be studied in the following bar graph.

Extent of Poverty In India (Percentage)



Observe the bar graph given above. In 1973-74 more than half of the Indian population was poor. Among them, the poor were more in

number in the rural areas than in the urban areas. But every year, the number of both urban and rural poverty is slowly coming down. In 2004-05, there was around 21.8 % poverty, and the figure was the same for both urban and rural areas. The planning commission of India recently adopted prof. Suresh Tendulkar's model of study poverty. According to its poverty which was 37.2% in 2004-05 has decreased to 29.8% in 2009-10.

Hunger and Famines

The main features of poverty are hunger and penury. Poor families do not get food easily or adequately. They do not have the means to buy food. Thus, they face food insecurity. Most of the poor people lead lives where they are under-fed and have to starve.

Recently, a yardstick known as 'World Hunger Index' has been formulated to measure the amount of world hunger. This yardstick has been formulated based on the three factors of the amount of malnutrition in people, the problem of under-weight in children and child mortality rate. According to this, one person out of every seven people in the world goes to bed without food everyday. As per the world hunger Index, a list of 84 countries was prepared in 2010, in which India stood at the 67th place.

According to recent national family health surveys, around 79% children and 58% pregnant women suffer from anemia in India. One in every two children and one woman among three women are under-weight. 42% of the world's under-weight children are in India. Anemia and under-weight are the results of hunger.

Six decades have passed since we got independence. In this period we have almost achieved self-sufficiency in production of food grains. This means that we are capable of growing food grains sufficient for our country. We are in the first position in the world in the production of milk. Production of fruits and vegetables has also increased significantly. Hence it is paradoxical that still many people suffer from hunger in India. The lack of buying power among the poor, and the shortcomings in the distribution of food grains are the reasons for this paradox.

Generally, when natural disasters like earthquakes, drought, floods, Tsunamis and destruction of crops take place, the consequences will be devastating. In these circumstances, the production of food grains suffers and there is shortage of food. Due to shortage of food, the prices of food grains rise very high. At such times, poor people cannot afford to

buy food grains, and hence suffer from starvation. This kind of collective starvation leads to famine.

People dying in large numbers due to starvation and infection caused by contaminated water is called famine. In 1943, in India, severe drought occurred in the Bengal province. At that time, around 60 lakh people died due to drought. Though such a drought hasn't occurred in India again, in the media, starvation deaths have been reported in certain areas of the backward states like Bihar, Rajasthan, Madhya Pradesh and Orissa.

Self-sufficiency has been achieved in the production of food grains in recent years. The public distribution system has been strengthened. In addition, the buying power of people has been improved through implementation of poverty alleviation programmes. Consequently, the amount of hunger in India is reducing.

Food Security and Eradication of Poverty

Food is very essential for human life. But there is food insecurity among the poor. If poverty has to be eradicated, food security has to be first provided to the poor. So, what is food security?

Food Security: Food Security refers to that system which ensures the provision of food at all times to everyone in the country. Food security fulfils the following three assurances:

1. To provide sufficient food to all people in the country.
2. To increase the food buying power of people.
3. To remove the hindrances for the poor while accessing food.

In the 1970s, scientific farming practices were implemented in India to increase agricultural production. As a result, the production of food grains improved significantly. This has been identified as the Green Revolution. India achieved self-sufficiency in the production of food grains due to the green revolution.

In order to systematically store the excess food grains produced in the country, and to properly distribute the stored grains to all the parts of the country and to all classes of people, the government has formulated a comprehensive food security system. The food security system consists of two stages:

Cultivation of land by using scientific contributions like HYV seeds, improved fertilizers, pesticides, modern equipment, etc. is called scientific farming.

1. Buffer stock
2. Public Distribution System

Buffer stock : The government buys the excessive food grains from the farmers at the time of harvest through the Food Corporation of India (FCI). This type of collecting the food grains is called buffer stock. The Food Corporation of India mainly collects paddy and wheat. It buys the food grains from the farmers at previously fixed prices. This is called the minimum support price. Every year, before sowing of seeds, the government announces the minimum support price for certain agricultural products. This practice motivates the farmers to increase agricultural production. By procuring and storing food grains, the shortage of food that might occur due to natural disasters can be avoided.



Picture of Bufferstock

Public Distribution System:

The food grains collected by the Food Corporation of India are distributed to poor people at low prices through the government-controlled fair price depots. This is called the public distribution system. Food grains, sugar, kerosene, cooking oil and other essential ingredients are distributed through the fair price depots.

These items are sold at rates

much lower than the market rates. The government has enabled fair price depots to be opened in almost all villages, towns and cities. There are around 4.7 lakh fair price depots in India today, and around 16 crore families are benefitting from them.

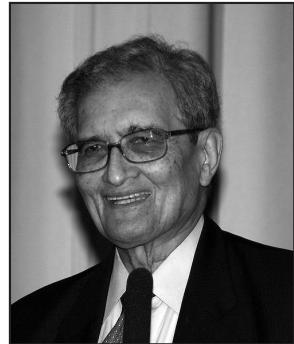
The government has identified poor families and provided BPL (Below poverty line) ration cards to them. The families with ration cards receive the fixed amount of food grains every month.

Under the food security system, the government has implemented the Integrated Children's Development Scheme (ICDS). Measures have been taken to remove malnutrition of children through this scheme. The Midday Meal Programme has been introduced and measures have been taken to provide at least one full meal to school children. Very poor families have been identified and food grains are being distributed to them at very low prices under the Antyodaya Anna Yojana. In this manner, the government is making many attempts to remove hunger and malnutrition among the poor.

Eradication of Poverty

The government has taken many measures to provide jobs to poor people, in order to increase their buying power, and thus alleviate poverty. These measures can be classified into four groups. They are:

Dr Amartya Kumar Sen, Indian economist who won the Noble prize in 1998, maintains that a country can eradicate poverty through providing education and health facilities to all its people.



Dr. Amartyasen

1. Economic development measures : Economic development and poverty are related. As the country achieves economic development, the extent of poverty reduces. The government is attempting to achieve economic development through five-year plans. In addition to this, it is trying to reach the benefits of development to all classes of people.

2. Implementation of specific poverty eradication programmes : From 1960 onwards, the government has been implementing many employment-generation programmes in order to provide employment to people in the rural areas. These programmes can be classified into two groups. They are:

- **Self-employment programmes :** Many self-employment schemes have been implemented by identifying the poor and educated unemployed people, and providing them the necessary loans in order to engage in self-employment. Some significant schemes are :

1. The 'Integrated Rural Development Programme' (IRDP) which was implemented in 1980.
2. The 'Swarnajayanti Grama Swauryog Yojana' (SGSY) which was implemented in 1999.

- **Wage Employment Programmes :** Many 'Wage Employment Programs' have been implemented to provide jobs on a daily wage basis to poor, unskilled people with no property. They are being given jobs of creating community assets like tanks and bunds, roads, schools, hospitals and others.

In 2006, '**Mahatma Gandhi National Rural Employment Guarantee Programme**' was implemented. This has been the most ambitious daily wage program ever launched. Under this programme, from every poor family, members desirous of working are given daily wage work for a minimum of 100 days in a year in order to provide stability in their lives. Those who are poor and are ready to work for low wages, should register their names in their grama panchayat under this programme. If the registered job-aspirants are not given jobs within 15 days of registration, they will be given the daily unemployment allowance as fixed by the government.

3. Provision of the minimum basic requirements: Many measures have been taken to provide the minimum basic requirements of the rural poor like food, shelter, education, drinking water, hygiene, etc., and improve the quality of their lives. Through the fair price shops, food grains are being distributed to poor people. The facility of health insurance is being provided to poor people under 'Yashaswini Yojana'. Houses are being constructed for them under 'Indira Avaas Yojana' and 'Valmiki-Ambedkar Avaas Yojana'. Toilets are being constructed under 'Nirmal Gram' programme. In 2000, 'Prime Minister's Gramodaya Yojana' (PMGY) was implemented. Under this programme, the rural poor are being provided with primary education, primary health care, shelter, drinking water, rural lighting and other services.

4. Social Security Measures: The protection that the government provides to the helpless, the aged and the handicapped among the very poor people is called Social Security. Deserted old people get Old Age Allowance every month under 'Sandhya Suraksha Yojana'. Handicapped people and helpless people incapable of doing any work get Disability Allowance every month. Poor widows get Widow Allowance every month.

In this manner, the government is trying to bring the poor people above the poverty line through various programmes. As a result, the extent of poverty is gradually reducing. Isn't it sad to suffer in poverty even after the government has provided so many facilities?

Exercises

I Fill in the blanks with suitable words :

- 1 According to the National Sample Survey Organisation (NSSO), in 2004-05, there were _____ % poor people in India.
- 2 The person who first brought the poverty line concept into practice to identify poor people was _____.
- 3 The Indian government has established _____ to buy and store food grains.
- 4 The Health Insurance that is provided to poor people is called _____.
- 5 The project that has been implemented for the purpose of providing old age pension is _____.
- 6 The government fixes the minimum price for the food grains before sowing season. This is called _____.

II Answer the following in a sentence each :

- 1 Give the meaning of 'poverty'.
- 2 What are the basic requirements of human beings?
- 3 What is 'poverty line'?
- 4 What is the indicator framed to measure amount of hunger?
- 5 What is 'food security'?
- 6 What is meant by buffer stock?

III Answer the following in five-six sentences each :

- 1 How is poverty identified in India?
- 2 What are the indicators of poverty?
- 3 Although India has achieved self-sufficiency in the production of food grains, it has not been able to get rid of hunger and drought. Why?
- 4 Explain the working of the public distribution system in India.

- 5 List out the measures taken by the government to eradicate poverty.
- 6 Mention the social security measures being provided to the poor people.
- 7 How has the 'Mahatma Gandhi National Employment Guarantee Programme' helped to eradicate rural poverty?

IV Suggested Activities :

- 1 Observe the nomadic people who live in temporary tents built on the footpaths and open spaces. Discuss their food habits, shelter and the education of their children.
- 2 Visit a slum in your village town/city. List the civic amenities that are provided to them. What can you suggest to improve their living conditions?
- 3 Pay a visit to the nearest Grama Panchayat and get to know how they identify poor people.

V Project Work :

Visit a fair price depot in your town/village. Collect information about the following topics:

- 1 Which are the goods distributed there?
- 2 At what prices are the goods distributed? What is the difference between the prices of the goods there and those sold in the grocery shops?
- 3 In fair price shop to how many families are the food articals being distributed?

BUSINESS STUDIES

CHAPTER - 1

EVOLUTION AND GROWTH OF COMMERCE

After studying this chapter you:

- learn about the basic aspects of business studies (economics activities and types)
- understand the different stages involved in evolution of business.
- describe the role of trade and commerce in economic development.
- explain the mode of development of commerce during 21st century.

In this part of social science let us learn some basic aspects of business studies. Economic activities form the base for all business activities. Let us discuss in brief the economic activities and its aspects.

Economic activities : We have innumerable wants. To satisfy our wants we need goods and services. Goods are produced by agriculture and industry. We require many services also. These goods and services are to be distributed among us. The activities which are concerned with the production and exchange of goods and services are called economic activities.

Economic activities can be broadly classified into three types they are:

1 Business 2 Profession 3 Employment

1 Business : It is mainly concerned with production and exchange of goods and services.

2 Profession : It is mainly concerned with rendering of specialized technical and personal services. e.g.-Lawyers, doctors, chartered accountants etc.

3 Employment : It is the work undertaken by the people under an employer for salary or wages. e.g.- agricultural labourers, industrial labourers.

Employer is a person who appoints people to do work under him. The people who are appointed to do the work are called employees. Employer is also called the owner and the employee is called the worker.

Exchange : The distribution of goods and services is called exchange. Exchange is the connecting link between production and consumption. The goods produced at a place have to reach consumers at different places. During the course of production, the producers take into consideration, the market study, transportation, storage of goods, determination of price, advertisement, etc. All these aspects are included in the process of exchange. Today we have money as medium of exchange and exchange of goods and services is easy. The exchange system has become the foundation for business.

Consumption is the art of using services and goods. Consumer is a person who buys goods or uses services.

Evolution and Growth of Commerce

Any economic activity of human being is considered 'commerce'. It includes production, business, industry, banking, insurance agency, advertisement, transport and other factors which facilitate exchange of goods and services to the consumers. Evolution is the gradual change of activities that take place over a long period. The evolution that has taken place in commerce may be called "evolution of commerce" or "history of business". Commerce is the part of business which is concerned with the distribution of goods and services. Evolution of commerce has crossed over several stages to achieve today's position. The important stages are:

1. Hunting and fishing stage	5. Barter system stage
2. Pastoral stage	6. Money Economy stage
3. Agricultural stage	7. Town Economy stage
4. Handicraft stage	8. International Trade stage

The brief description of these stages is as follows:

1 Hunting & Fishing stage : It was the earliest stage of human civilization. During this stage man was a wanderer. There was no fixed place for him. He moved in groups from one place to another in search of food. They hunted animals for food. Fishing was also carried out by them. They gathered fruits, roots and nuts for food. They lived in caves or hollows of trees. They covered their bodies with leaves or skins of the animals to protect their bodies from the sun, wind and rain. No economic activity existed during this stage.

2 Pastoral stage : During this stage people learnt domestication of animals. In the beginning, cattle, sheep and goats were reared. These animals provided food to eat and skins to cover their bodies. They moved from one place to another in search of grasslands. Though man had reached some higher level in development, commerce did not exist.

3 Agricultural stage : After several years of pastoral stage people learnt the art of growing some crops. They started living at a fixed place. They lived in groups. Commercial activities started. The villages and communities came into existence. Simple form of division of labour started.

4 Handicrafts stage : The agriculturists wanted some tools or implements. They wanted houses to live. To fulfil these requirements some people engaged themselves in making tools and also to construct houses. They were called craftsmen. Gradually a body of these professional craftsmen such as carpenters, blacksmiths, weavers, builders came into existence. They carried on the production of goods in their houses and supplied to the agriculturists. In return the agriculturists provided them with their requirements. Barter system of exchange came into existence.

5 Barter system stage : The division of labour enabled quick production of goods. The goods produced were directly exchanged. The direct exchange of goods for goods or other things is called Barter system of Exchange. Some problems cropped up as a result of direct exchange. The important problems of Barter system of exchange were :

- 1. Lack of double co- incidence of wants :** If two parties exchange goods with each other, we call it co- incidence of wants, but such double co-incidence was rarely found. e.g.- 'A' has paddy and wants wheat, 'B' has wheat but wants jowar and 'B' is not prepared to take paddy.
- 2. Lack of common measure of value :** It was very difficult to decide the quantity of one commodity to another. e.g.- For one cow how many sheep or for one measure of wheat how many measures of jowar etc... was difficult to divide.
- 3. Difficulty of sub- division :** It was very difficult to divide some animals or things. e.g.-To divide the cow for some sheep.

4. Difficulty to store the goods or to transport : The movement of goods from one place to another place was also a problem. It was also difficult to preserve some goods over a long period.

6 Money - Economy stage : To overcome the difficulties of Barter system of exchange many mediums of exchange were used. eg- The skins of the animals, cowry shells etc., later the metals were used as medium of exchange. The metals were brought to a particular shape and weight and used as exchange medium. Later copper, silver and gold coins came into existence. Here also some difficulties were experienced, mainly transportation. Later paper money came to be used. Paper money is a token money which generally comprises of bank notes issued by the central bank of the country. It has full support of the government. Now a days bank money in the form of cheques, drafts, bills, credit card, debit card etc., play a very important role.

7 Town Economy stage : The introduction of bank money as medium of exchange resulted in the fast growth of commerce. People began to produce more goods. The producers started meeting at a fixed place at periodical intervals for exchange purpose. They were called local markets. Gradually these local markets developed into towns and centres to supply goods. The merchants came into existence, they invited the craftsmen to a particular place, collected raw materials and started producing finished products and supplied to the consumers. During this stage commerce developed largely and markets extended far and wide.

8 International Trade stage : Geographical discoveries took place during 15th and 16th centuries. Columbus discovered America. Vasco-da-gama discovered the new sea route to India. Megallan, a Portuguese navigator with the help of the king of Spain, set his sail to circumnavigate the world. He crossed over the southern cape of South America and reached Pacific ocean. He reached Philippine islands and was killed by locals but his ship '**Victoria**' returned to Spain after three years. This was the first ship which sailed round the world. That is what we say "Megallan was the first whose ship sailed round the word".

The Industrial Revolution, which took place in England and geographical discoveries helped for large scale production of goods not only for the local markets but also for other countries. Standardized goods were produced with the help of machines. Revolution in transportation and communication helped the expansion of markets. The production of goods, was carried out not only for the national markets but also for the international markets.

Role of Business and Commerce in Economic Development

Trade is nothing but buying and selling of goods. On the other hand commerce includes trade and also aids to trade or auxiliaries to trade. The aids to trade include transport, banks, warehouse facilities, advertisement agencies, insurance etc. Traders supply goods to the consumers according to their daily needs. They provide some services also. For the smooth conduct of business transport helps for the movement of goods from one place to another, banks help to provide financial assistance, insurance Companies cover the risk to which goods are exposed while in movement or during storage. Warehouses help to store goods and bridge the gap between production and consumption. Advertisement helps to give information about the goods produced and also about the goods available in the market.

To sum up the importance of commerce : Commerce is responsible for smooth and continuous supply of goods to consumers. Commerce helps in bringing the factors required for the establishment of industries. Commerce brings the different parts of the world closer, thereby creating one market. It helps the traders to become more adventurous. Commerce equalizes prices, blends the ideas and cultures and helps for national and international integration. Commerce also helps the government; its contribution through rates, taxes and duties is a good source of income to the government.

Development of Commerce during 21st century : 21st century is called the age of information technology, internet banking, privatization of insurance, telemarket system. Electronic advertisement media and such others have spread all over the world. Multinational Companies (MNC) have spread their business in many countries. They help to increase production and supply of goods to the world market. These companies produce specialized goods on large scale and their rates are competitive. On the whole, commerce is developing at a great speed.

Exercise

I Fill in the blanks with appropriate words in the following sentences:

- 1 The economic activity that provides technical or specialized personal services to the consumers is called _____.
- 2 In olden days the goods were exchanged for goods, which was called _____ system of exchange.
- 3 The full responsibility of paper money vests with _____.
- 4 The emergence of communities and villages took place during _____ stage.
- 5 The main cause for International trade was _____.
- 6 Trade and commerce contribute to the economic development of a country by paying _____ and _____ to the government.

II Answer each of the following questions in two or three sentences:

- 1 What is an economic activity?
- 2 Give the meaning of trade and Commerce.
- 3 What is meant by Barter system of exchange?
- 4 What is a profession?
- 5 What are aids to trade ? Name them.
- 6 What are craft guilds ?

III Answer each of the following questions in a paragraph:

- 1 How do production and exchange play a very important role in our daily life?
- 2 Explain the different types of economic activities.
- 3 What are the difficulties of Barter system of exchange? How has money solved these problems ?
- 4 Which are the important stages of economic evolution? Briefly explain any one.

IV Activity:

List out the craftsmen found in your place, get to know the complete activity of any one of them and prepare an essay on it.

CHAPTER-2

BUSINESS -MEANING AND IMPORTANCE

After studying this chapter you would :

- understand the objectives of business.
- know the meaning and importance of home trade, foreign trade and enterepot trade different types of trade.
- able to discuss the features of production and problem of cottage and small scale endustries.
- know about the business ethics.

Business is an important economic activity mainly concerned with production and distribution of goods and services to consumers. Business has two main objectives:

1 Economic objectives 2 Social objectives

Economic objectives : We are under the impression that earning profit is the main objective of business. But it is not so, the sole objective of business includes earning reasonable profit that is sufficient to enable the business to cover the costs and the business man to lead a normal comfortable life. Business supplies goods and services to the consumers and thus creates consumers. It uses the available resources to produce the goods that are sufficient to consumers. It produces such goods that are required from time to time according to changes that take place. It brings changes in production by adopting new techniques. It also enable the consumers to know about the changes in products through advertisement.

Social objectives : Business produces goods supplies the goods that are required for the development of a nation. It provides employment to many and pays them fair wages and salaries and helps them to improve their standard of living. Business contributes its share the economic development of a nation by paying rates, taxes and duties. Business also contributes a fair share for the social welfare of the nation by starting and running of schools, colleges, hospitals, and also by maintaining public gardens etc.

Trade, Industry and Services

Trade is a part of business. It is mainly concerned with buying and selling of goods to the consumers. Trade is divided into three types, they are, 1. Home Trade, 2. Foreign Trade and 3. Entrepot Trade.

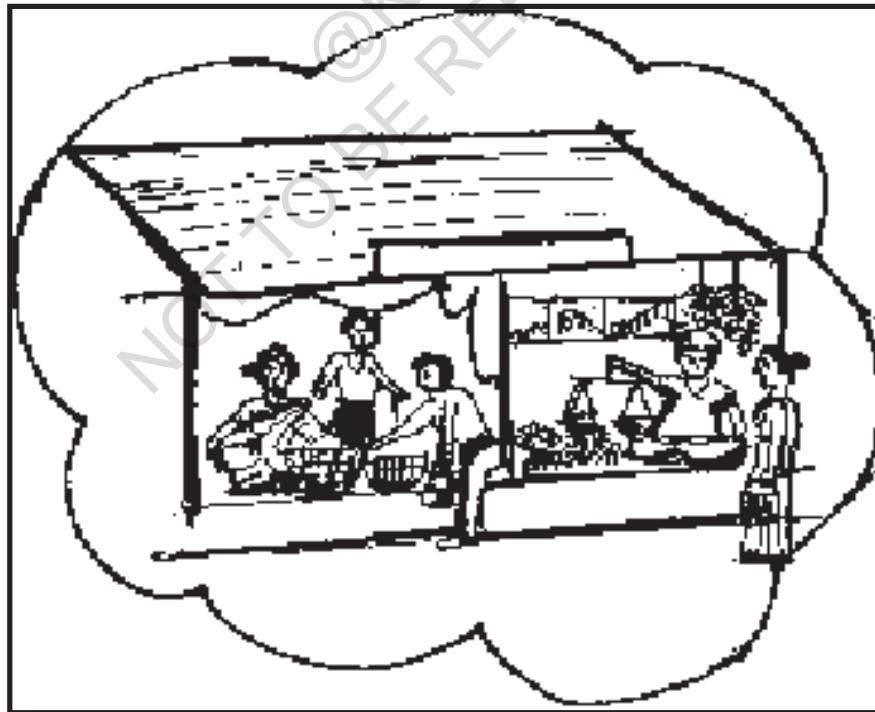
Home Trade : Trade within the country is called home trade. It is carried through Retailers and Whole Salers.

Retail Trade : Retailers carry out their trade at places where consumers live. They buy goods from the whole salers and sell them to the consumers. They render various services to the consumers. Some of them are: they are the last connecting link in the distribution of goods. They supply variety of goods produced by different producers to the consumers. They store the goods to meet the demand of the consumers. They take the risk of loss in business or loss of goods. They grade the goods and supply according to the tastes of the consumers.

They provide credit facilities to the consumers, give more information about the newly available goods in the market and suggest alternative goods of the particular goods that are not available.

Retail trade is carried out in different ways. The important types are :
a) Permanent shops b) Itinerant or mobile traders.

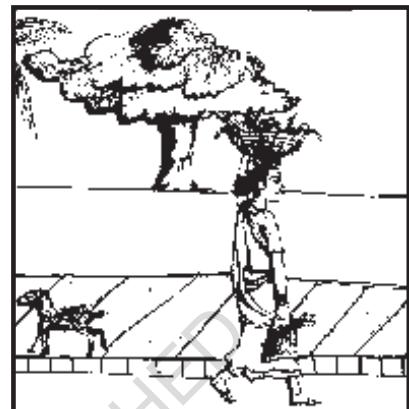
Permanent shops : They are opened at a fixed place and carry out trade.



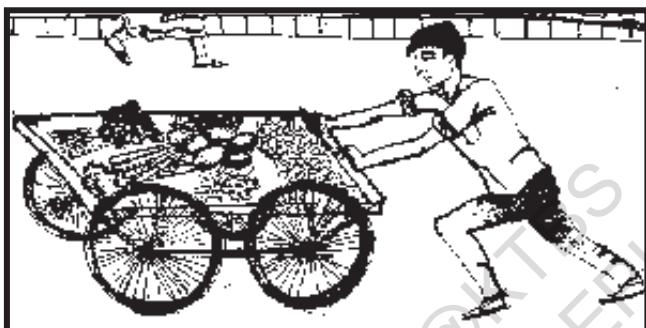
Permanent Shops

Itinerant or Mobile Traders : They do not have a fixed place to carry on their trade. The important among them are Hawkers, Peddlers, Street vendors and Market vendors.

Hawkers : They carry goods on their heads, move from "door to door" and sell their goods. They generally sell only one or two type of goods. e.g. - Vegetables, fruits, flowers etc.



Hawkers

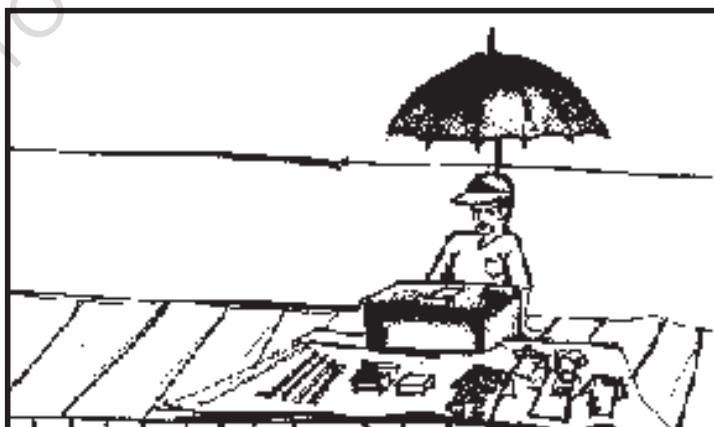


Peddlers

Peddlers : They carry their goods on wheeled carts and sell them to the consumers at their doors. They generally sell more than one type of goods.

Street traders or Foot path traders : They display goods in busy street corners or on pavements and sell them to the consumers.

Market sellers (shandy sellers) : Weekly markets take place at villages or towns once in a week. Different traders take their goods to these



Foot path sellers



Market sellers (shandy sellers)

markets and sell them to the consumers. Another speciality of these weekly markets is that the surrounding villagers bring the goods which they have grown or produced and sell them, eg. vegetables, eggs, butter, agricultural implements, blankets etc.., With the money they get, they buy their requirements. At some places yearly fairs take place and here too the traders gather and sell the products to the consumers.

Wholesale Trade : Wholesale traders buy goods in large quantity from producers and sell them to the retailers in small quantities. Generally, they deal with one or two types of goods. They help the retailers in many ways such as supplying goods to the retailers in small quantities. Whenever required, they provide credit facility to the retailers. They advertise for goods on behalf of the retailers. They supply market trends to the retailers. They do not keep high margin of profit. They render some services to the producers such as market trends, and advertise on behalf of the producers. They also provide storage facility for goods.

Foreign Trade : The trade between two countries is called foreign trade. Foreign trade can be classified into three types. They are: Imports, Exports and Entrepot trade.

Imports refer to a country buying goods from other countries for its use.

Exports refer to a country selling its goods to other countries for their use.

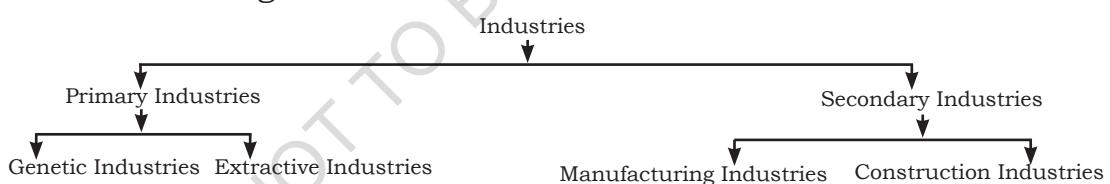
Entrepot Trade refers to buying of goods from one country with a view to sell it to other countries. Singapore and Middle East countries are the best examples for entrepot trade. Now a days many countries carry out entrepot trade.

Need for foreign Trade : No country in the world is self sufficient in all the natural resources. Some countries have plenty of natural resources. Using the available natural resources they produce more goods than they require and the excess is exported to other countries. In the same way some countries have deficit of some natural resources and depend on other countries for their requirement and import them. Thus there is a great need for foreign trade. The need for foreign trade is increasing day by day. It also helps to foster friendship among the countries.

Industries

Industry is an economic activity. It is concerned with production of goods, extraction of minerals and also providing some services. Industries may be classified into two main types. They are : Primary Industries and Secondary Industries.

The following chart shows the further classification of Industries.



Primary Industries

These industries produce goods by using the natural resources. e.g. - agriculture, fishing, dairy farming, mining etc. These industries are further divided as : genetic industries and extractive industries.

Genetic industries : These industries are engaged in reproduction of different crops, plants and animals. They help to increase the wealth of a nation. e.g. - horticulture, dairy farming, poultry farming, etc.

Extractive Industries : They are engaged in extracting different raw materials and ores from the earth. (It is also called non-renewable industry) e.g. - Extraction of ores, drilling of oil wells etc.,

Secondary Industries

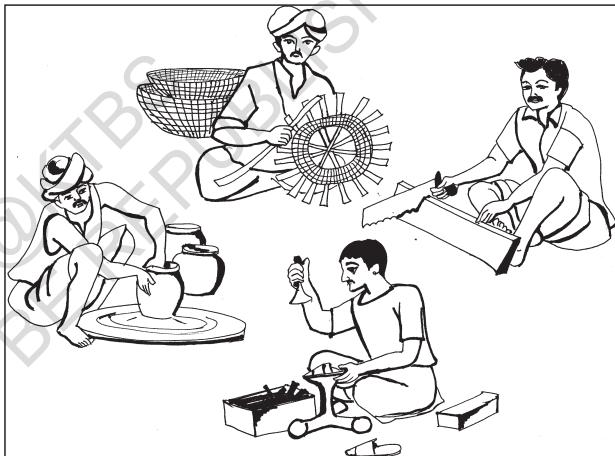
They are labour oriented industries. They are further divided into Manufacturing industries and Construction industries.

Manufacturing Industries : These industries are engaged in converting raw materials or semi finished products into finished products. They are mainly labour oriented and supply finished products to consumers, e.g. - Converting iron ore into steel, Sugar out of sugarcane etc.,

Construction Industries : They are engaged in construction of roads, canals, bridges etc. These industries help in the quick development of economic activities like - transport and communication etc.

Cottage and small scale Industries

Cottage industries are also called household industries. They are carried out by craftsmen in their own houses with the help of family members or apprentices (persons who like to learn work). They are mainly concentrated in the villages and produce goods mainly for the local markets. Carpentry, smithy, carpet weaving, pottery, blanket making, stone carving etc. are some examples.



Cottage Industries

Small scale industries These are organized on a small scale in a particular place (sheds). They use electric power and some machines. They employ labourers and adopt modern techniques. Chemical industry, manufacture of engineering goods, shoes, bicycles, fans, radios, sewing machine , soaps, garments are some examples for small scale industry. The goods are manufactured both for local and external market.

Services for smooth conduct of business.

For the smooth conduct of business the auxilliaries to trade came into existence. They are also called aids to trade or services to trade. There are some hindrance to transport goods from the producers to the consumers. The important hindrances are hindrance of place, hindrance

of risk of loss, hindrance of time, hindrance of finance, hindrances of knowledge etc. To over come these hindrances the following aids to trade have come into being.

Hindrance of place- Transportation : To over come the hindrance of place the services of transportation are used. Road transport, Railways, water transport and air transport are different media. These media help to reach the goods from producers to the traders and from traders to the consumers.

Financial services – Banks : In the distribution of goods from the producers to the consumers there is the hindrance or problem of finance. The supply of finance is required in all stages. Money is required to exchange media. These problems are solved by banks. Banks provide finance to the traders and serve to conduct the business smoothly.

Hindrance of Loss - Insurance companies : While moving goods from the producers to the consumers or while the goods are stored in warehouses, There is a problem of damage or destruction. To overcome this hindrance insurance facilities are available. The insurance companies help business by making goods the loss incurred by fire or water or that caused by natural calamities and thus help for the smooth conduct of business.

Hindrance of Time - Storage : The production of goods and their consumption take place at different times. To supply goods to consumers when ever they required them, they have to be stored. For this purpose there are warehouses. These warehouses are scientifically constructed and many warehouses have cold storage facilities also.

Hindrance of Knowledge- Advertisement : While distributing goods to the consumers, the knowledge about the goods has to be given to the consumers. Even when new goods are introduced into the market knowledge about them is also required or knowledge about alternatives is also to be given to the consumers. For all these proposes advertising services are very useful.

Business Ethics

We are under the impression that earning profit is the main objective of business. But it is not so, The objective should be to include reasonable profit and to enable the business to cover the cost. Trade and commerce are perhaps the older traditional occupations. Traders supply goods to the consumers. They supply essential commodities. They are supposed to keep marginal profit to cover their cost. By doing so ethical principles in the business are developed. But it is unfortunate that greed and profiteering have entered into business. To earn more profits, some anti social practices are followed, and some of them are-adulteration, charging excess or abnormal rates, using false weights and measures, creating artificial scarcity by hoarding the goods and carrying out black marketing etc. These are unethical business practices. By such acts people suffer untold miseries. Such unethical practices should be avoided. In our country to avoid such practices the Government has introduced Public Distribution System. (Supplying essential commodities through fair price shops). To maintain the standard of goods and essential commodities the government has opened an institution - Bureau of Indian standards. ISI and AGMARK marks are printed on goods and commodities to certify their quality etc... Every industrial product must have a seal on its cover pack, the quantity, the date of manufacture, date of expiry, Maximum retail price (MRP). It is a legal mandatory provision. Government has also opened Janatha bazaars, consumer co-operative societies etc. to supply essential commodities to the people.

Exercises

I Fill in the blanks with appropriate words:

- 1 The best example for Entrepot trade is _____.
- 2 Cottage industries are mainly concentrated in _____.
- 3 The manufacture of chemicals is carried out in _____ industries.
- 4 The sole objective of business should be earning _____ profit.
- 5 To safeguard the quality of goods _____ institution has been started.

II Answer each of the following questions in two to four sentences:

- 1 Which are the different types of mobile shops ?
- 2 Who are wholesalers?
- 3 Name the three types of foreign trade.
- 4 Mention the important goods produced by cottage and small scale industries.
- 5 Which organizations overcome the hindrance of place and risk ?
- 6 Mention the antisocial activities of traders to earn more profit.
- 7 What are the steps taken by the government to overcome the antisocial practices in business ?

III Answer each of the following questions in eight to ten sentences:

- 1 What are the economic objectives of business ?
- 2 What are the social objectives of business ?
- 3 Mention the services rendered by retail traders.
- 4 List out the different retail traders and write two/three sentences on each of them.
- 5 Explain briefly the two types of Industries.
- 6 What is the need of foreign trade to a country ?

IV Activity:

Visit weekly market near your place and learn how buying and selling is carried on there.

CHAPTER-3

EMERGENCE OF DIFFERENT FORMS OF BUSINESS ORGANISATIONS

After studying this chapter you would :

- know the types of business organisations.
- understand the features, advantages and disadvantages of partnership firms.
- know about Hindu undivided family business concerns.
- know the partnership registration procedure.

Today we see different forms of business organizations. They may be classified into four types. They are:

1. Business organizations in the private sector.
2. Business organizations in the public sector.
3. Joint sector business organizations.
4. Public utilities.

In this chapter and the next one we shall learn briefly about the small scale business organizations and large scale business organizations that come under Private sector. The small scale business organizations under private sector are mainly divided into three types. They are: Sole trading concerns, Partnership firms, and Hindu undivided family firms.

Sole trading concerns : It is run by a single person. He is the owner, and the manager. He enjoys all the profits and fully responsible for losses. He is the person solely invests capital to run the business.

Features : It is one of the oldest and simplest forms of business organizations. It is owned and managed by a single person. It is easy to start a business. These concerns are run by the sole traders for profits. The sole trader uses his own skill and responsible for all the losses. He takes the help of his family members or appoints some workers to help him in business. Generally they are small in size. But now a days they run on big scales also.

Advantages of Sole Trading concerns : No legal formalities are required to commence the business. It can be started by own capital. No difficulties arise in day to day running of the business. The owner

enjoys all the profits and bears all the losses. They directly come into contact with the consumers. They render some social services also. They provide employment to some people. They help in distribution of wealth. They understand the likes and dislikes of the customers and supply goods accordingly they pay rates, taxes and duties to the government. They are in a position to take quick decisions regarding business. They maintain business secrets.

Disadvantages of Sole trading concerns : Sole trading concerns are not free from some disadvantages. They are : Capital is limited and they cannot expand the business. Since it is run by a single person the managerial ability is limited, (two heads are always better to take decisions). All the losses are to be borne by a single person. Life of the sole trading concerns may be short, with the death or insolvency of the sole trader, the trading concerns will be closed.

PARTNERSHIP FIRMS

The limitations of the sole trading concerns lead to the formation of partnership firms. In these firms two or more persons join together and carry out the business. Partnership firms Act was passed in 1932. According to the section 4 of partnership act the partnership firm is defined as the relation between the persons who have agreed to share the profits of a business carried on by all or any of them acting for all. The maximum number of partners is fixed to Ten if they carry out the banking business and twenty in case of carrying out general business.

Types of partners : There are several types of partners, but generally we find: Active or working partners, Sleeping partners, Nominal partners and Minor partners.

1) Active Partners : They contribute fixed amount of capital, and share profits and losses in proportion to their capital contribution and take active part in carrying out the day-to-day affairs of the business.

2) Sleeping Partners : They contribute capital but do not take active part in day-to-day transactions of the firm. The profits and losses are shared in proportion to their capital contribution.

3) Nominal Partners : They neither contribute capital nor take active participation in day to day transactions of the firm. They are not entitled for any share in profit but they are liable for business losses.

4) Minor Partners : These partners are those who have not yet attained the age 18 years. A minor cannot become a partner. But by mutual agreement of the partners a minor can be admitted as a partner. The minor partners are eligible for profits but not eligible for defaults or losses. When a new partnership is started the minor cannot be admitted.

In addition to these types there are secret partners, limited partners and partners eligible only for profits.

Partnership deed : There shall be a deed of partnership. Generally it is in writing, duly stamped and signed by all the partners. It differs from firm to firm. It contains all the terms and conditions of the firm. Generally it contains the name of the firm, names and addresses of partners, the addresses of the firm, nature of business, address of the branches if any, date of the commencement of business, contribution of capital by each partner, the ratio of sharing profits and losses, duties of each partner, division of work by each partner, the conditions to be followed at the time of admission of a new partner, valuation of goodwill at the time of admission of a partner or at the time of closing the business, the procedure to be followed whenever differences arise among the partners.

Merits of Partnership Firms

1) Easy to form : No legal formalities are required for the formation of partnership firms. Even the registration of partnership firm is not compulsory, therefore the partnership firms are started easily.

2) More capital : Partnerships are formed by more than two persons, so the capital investment is more.

3) Better efficiency : There are more than one person as partners. Division of labour can easily be adopted, so there is better managerial ability and it increases efficiency.

4) Credit worthiness : The liability of partners is unlimited so it leads to increase in credit worthiness.

5) Sharing of business loss : All the partners have to share the profits and losses. The loss is not borne by one but it is shared among all the partners.

6) Secrecy of business : The partnership firms need not publish their accounts. Thus there is a scope for maintaining secrets of business.

7) Simple dissolution : Partnership firms can be dissolved easily. Any partner can apply for dissolution by giving fourteen days notice or with the consent of all the partners it can be dissolved.

Demerits of partnership firms :

1. Sometimes the disunity among the partners may hamper business and it leads to disputes.
2. Since the number of partners is limited, the capital contribution is also limited.
3. Liability is unlimited, so it discourages many people to join as partners.
4. Reckless and foolish decisions of some partners may lead to heavy setbacks
5. Partnership firms lack continuity; the death or insolvency of one partner may lead to dissolution.
6. It is difficult to transfer the share of partners to others.
7. Owing to lack of control by the government and publishing of accounts, partnership firms can not gain public support.
8. The secrecy of the business can not be maintained since there are two or more than two partners.

Registration of partnership firms

There is no provision for registration of sole trading concern. The Indian Partnership Act of 1932 provide for the registration of partnership

firms. But it is not compulsory. It is left to the discretion of the partners. Registration can be made at any time. For the purpose of registration a statement in the prescribed form duly filled with correct particulars must be submitted to the registrar of firms, appointed by the government along with the prescribed fees. The Registrar after satisfaction that all the provisions have been compiled with, issues a certificate called "Certificate of Registration".

Advantages of Registration

1. A Registered firm can file a suit in the court of law against third party. But it is not possible in case of an unregistered firm.
2. A Registered firm can file a case against the other partners against the loans they owe to the firm.
3. However third parties can file a case against an unregistered firm for the recovery of loans.
4. Any partner can file a case against the firm or other partners for the dissolution of the firm or for the settlement of accounts.

Hindu undivided family business concerns

They are found only in India. They are in accordance with "HINDU LAW". They are the firms which consist of all the male members of the Hindu family, descendants from a common male ancestor. Only three successive generations of male members namely, sons, grandsons and great grandsons acquire the birth right or interest in the ancestral property. The eldest or senior most member of the family manages the business and he is called "KARTA". The liability of Karta is unlimited. While the liability of other members is limited to the extent of their share in the business.

Exercises

I Fill in the blanks in the following sentences with appropriate words:

- 1 The concern that is owned and managed by a single person is called _____.
- 2 The Indian Partnership Act was passed in the year _____ to regulate the affairs of the partnership firms.
- 3 The Maximum number of partners in a firm which carries out banking business is _____.
- 4 The Head of the Hindu undivided family business is known as _____.
- 5 The only business concern under private business organization found in India is _____.

II Answer the following questions in one or two sentences each:

- 1 Which are the small scale business organizations ?
- 2 How do sole trading concerns help the consumers ?
- 3 What are partnership firms ?
- 4 Who are sleeping dormant partners ?
- 5 How is the dissolution of partnership firm easy ?

III Answer the following questions:

- 1 Mention any four merits of sole trading concerns.
- 2 Mention any four limitations of sole trading concerns.
- 3 How are partnership firms started ? Explain briefly.
- 4 Who are the different types of partners ?
- 5 Mention any four merits of partnership firms.
- 6 Mention any four demerits of partnerships firms.
- 7 What are the advantages of registering a partnership firm ?
- 8 Explain briefly about “Hindu undivided family business”.

IV Activity:

Collect two advertisements and study them in the context of your lesson.

CHAPTER-4

LARGE SCALE BUSINESS ORGANISATIONS

After studying this chapter you would :

- recognise the importance and salient features of large scale business organisations.
- understand the principles, types, merits and demerits of co-operative societies.
- understand the formation, structure, merits and demerits of Joint-Stock companies.
- analyse the features, merits and demerits of multinational companies.

Sole Trading concerns, Partnership firms and Hindu undivided family business organizations suffer from the problems of inadequate capital, managerial ability, absence of continuity and unlimited liability. To overcome these problems large scale business organizations came into existence. The important large scale business organization are :

1 Co-operative societies 2 Joint stock companies 3 Multinational companies.

CO-OPERATIVE SOCIETIES

They are one of the business organisations found all over the world. They are voluntary organizations started by economically weaker sections of the society with the motive of organising and rendering service to its members. The first co-operative society was started by Robert Owen in the year 1844 at Rochdale in England. It was a consumer Co-operative society. Generally these societies are started to achieve the economic progress of the people who join on the basis of equality. These societies free their members from economic exploitation. eg. 1) farmers join together and start a Credit Co-operative Society to avail loans at a lower rate of interest and free themselves from the clutches of money lenders. 2) Co-operative marketing societies are started by small producers in order to save themselves from the clutches of the middlemen.

Formation of Co-operative societies : In India formation of Co-operative societies is governed by the provisions of Co-operative Societies Act of 1912 or the state government acts in force in different states.

To form a Co-operative society, there must be at least ten members. They must live in the same locality or must belong to same class or must have engaged in same occupation and must have common economic need. These members are called promoters. They prepare an application in prescribed form and submit it to the Registrar of Co-operative societies of the District where the society has to be established along with the prescribed fees. The application should contain the following information.

1. Proposed name of the society
2. Address of the society
3. The aims and objectives of the society
4. The area of its operation
5. Particular of share capital proposed to be raised
6. The responsibility of the members etc.,

These are called Bye -laws of the society and they should be submitted to the Registrar of Co-operative societies of the districts. receipt of the application the Registrar will thoroughly examine on and if he is satisfied, will issue a certificate called the Certificate of Registration. On receipt of the Certificate of Registration, the society comes into existence.

General features of Co-operative Societies

1. They are voluntary organizations.
2. The membership is open to all adults (above 18 years) irrespective of caste, religion, creed and gender.
3. There is no limit for maximum membership.
4. There is democratic management. All the members attend the General Body Meeting and each member has one vote irrespective of capital invested (not less than 6.25%) Profit is distributed equally among all the members.
5. They are registered organizations with government control.
6. One portion of the profit is transferred to general fund.

Types of Co-operative societies

1. Credit Co-operative societies.
2. Marketing Co-operative societies.
3. Producers Co-operative societies.
4. Consumers Co-operative societies.
5. Farmers Co-operative societies.
6. House building Co-operative societies.
7. Co-operative societies for different services such as – supply of drinking water, improvement of education, etc.

Advantages of Co-operative societies : It is easy to form Co-operative societies. There is no need for heavy capital. There is no discrimination among the members. All the members have equal rights and responsibilities. It runs on democratic principle. Each member has one vote. The liability of the members is limited. They help the members to develop thrift (savings). The Co-operative societies are golden medium between capitalism and socialism. The main motto of the Co-operative societies is “Each for all and all for Each”

Demerits of Co-operative societies : The societies have limited capital resource. So large scale business is not possible. It is very difficult to get suitable staff. There are chances of mismanagement and misuse of money; corruption and favouritism.

Co-operative Movement in India

The Co-operative Movement was started in India by passing the Co-operative Act in 1904. An act was passed in 1912 and registration was made compulsory. After independence under Five Year Plans the Co-operative societies have been in large numbers started. Today we have about eight lakh Co-operative societies in our country. In our Karnataka state the first Co-operative society was started at ‘Kanaginahala’ in Gadag Taluk now a District. The Bangalore City Central Co-operative society was started in 1905. Dharwad district of our state gave top prominence to Co-operative movement and hence Dharwad district is called “The cradle of Co-operative movement”.

JOINT STOCK COMPANIES

Joint stock companies Act of 1956. regulates the formation, extension, functioning, and liquidation of Joint stock companies in India. According to Joint Stock Companies Act of 1956 a Joint stock company is defined as a business organization created by law, having a separate legal entity with a perpetual succession and a common seal. Heney defines Joint stock companies as “a voluntary organisation of individuals for profit having its capital divided into transferable shares. The ownership of which is the condition of membership”

Types of Joint Stock Companies

1. Chartered company
2. Statutory company
3. Registered company
4. Companies limited by shares
5. Companies limited by guarantee
6. Unlimited companies
7. Public limited companies and private limited companies.
8. Foreign company
9. Holding Company.
10. Undertaken company.

Promotion of a Joint stock company

The promotion of a Joint stock company includes different stages. They are :

- 1 Promotion
- 2 Registration or Incorporation
- 3 Capital subscription
- 4 Commencement of business

Promotion stage : It is the first stage in the formation of a Joint stock company. Some persons join together with a view to start a company. They are called Promoters. They collect all the information regarding formation, promotion, financial requirement and others. They prepare necessary documents like Memorandum of Association, Articles of Association and Prospectus for Registration. They submit these documents to the Registrar of companies for Registration. They take necessary steps to pool the share capital in case of public companies. They follow up the process to obtain Certificate of Incorporation. These promoters work as first directors to formulate the company.

Registration : For public companies, a name has to be chosen. This name should not be identical to any existing company and should not have the implication of the patronage of the government company. The promoters then submit the requisition letter along with the written documents such as Memorandum of Association and Articles of Association to the Registrar along with prescribed stamp duty. The document must be signed by the first seven directors. It should contain the name of the company, the names of first seven directors, their addresses, their consent to act as first directors along with two witnesses. A Chartered Accountant or practising advocate of supreme court must countersign it stating that all the required formalities are fulfilled. The Registrar of companies verifies all the details and documents and after satisfying himself, registers in the Register of corporation of companies and issues the Certificate of Incorporation.

The important documents required for the formation of a Joint Stock company are Memorandum of Association and Articles of Association. In case of public limited companies prospectus is issued to the public to pool the share capital.

The Memorandum of association contains the aims and objectives of the company, the different types of shares, the ways of subscription, etc. The Articles of Association contains the rules and regulations regarding the administration of the company.

Capital subscription stage : After receiving the Certificate of Incorporation, the directors issue prospectus to the public. With this the capital subscription to the company starts. A private limited company can not issue prospectus but in lieu of prospectus a statement is submitted to the Registrar.

Commencement of business : Even after raising the capital, a public limited company, cannot commence business. In order to commence business it should get a Certificate called "Certificate to Commence the business" from Registrar and only after obtaining this certificate the company can start its business.

Merits of Joint Stock Companies

1. The liability of share holders is limited. That means when company incurs any loss or unable to clear the debts to the creditors, the liability of share holders is limited to the extent of their share amount.
2. There is no limit for share holders in the public limited companies, hence there is a possibility of raising more capital.
3. The shares in public limited companies are freely transferable. It encourages the public to come forward or invest their money in companies.
4. A Public Joint Stock company has a perpetual succession. The death or insolvency of any director or member does not lead to the dissolution of the company.
5. There is a large capital investment and managerial ability; so it is possible to run large scale business.
6. Large scale production helps for goods to be produced at lower cost and can sell at competitive prices.
7. The public limited companies provide employment to a large number of people. Thrift is also encouraged among the people.
8. The companies contribute to the economic development of a nation by paying rates, taxes and duties to the government.
9. Administration is carried on by the experts.
10. Joint Stock Companies help a country to earn foreign exchange.

Demerits of a Joint Stock Companies.

1. The formation of a joint stock company is expensive and it is required to fulfil many formalities. The process is difficult and cumbersome.

2. The share holders are the real owners of the company. But they do not take active part in the affairs of the company. The Directors only look after the day- to-day affairs. Large number of share holders do not attend the annual general body meetings.
3. There is no personal contact between the owners and the workers.
4. Limited liability may lead the directors to take wrong decisions.
5. The powers of the company are vested with only a few people. Many a time they act like dictators.
6. Many a time these Joint Stock Companies try to control the government also.

MULTINATIONAL COMPANIES (MNC's)

Multinational companies took their birth as early as 1861. But they became popular after the Second World War. In the early days U.S.A was the home of these companies. Later on a large number of these companies emerged in European countries and Japan. Today multinational companies have developed even in developing countries. South Korea has a number of multinational companies like Samsung and Hyundai; Indian companies such as Tatas, Birlas etc., have become multinational companies.

Meaning and explanation of Multinational companies

A Multinational company owns and manages business in two or more countries. According to ILO (International Labour Organisation) report, the essential management of the multinational enterprises lies in one country and they carry on their business in a number of other countries e.g. Sony (Japan) Coca-cola (USA), Samsung (S. Korea), Hindustan lever (U.K), Philips (Holland), Glaxo (U.K), etc.

Features

1. They are large companies. Their assets and transactions are also of large scale.
2. They operate their business at least in six countries.

3. They produce goods even in the countries where they operate their business.
4. They have centralised control from head office.
5. They have production, marketing and other facilities in several countries.
6. They play an important role in International Trade.
7. They provide technological facilities in the countries which come under their preview.

Advantages for Home country

1. They obtain raw materials from host countries.
2. They may also obtain the technological and administrative skills from host countries.
3. They export raw materials and finished products to host countries thus their profit is more.
4. It is possible to earn profit, royalty and through administrative agreement with host countries.
5. They create more employment opportunities in the home country.

Advantages for depending or host countries

1. The capital investment increases even in host countries.
2. If the host countries are developing countries, the home country provides technology and administrative skills, through which the production is revolutionalised.
3. The host countries are helped by exporting more and importing less.
4. It is possible to produce standardized products.
5. The employment opportunities, new innovations and developed skills improve in depending countries.
6. They help the utilisation of internal resources.

Demerits of Multinational companies.

Home country gets lion's share in the profits. They develop dominance in host countries. The competition in host countries may vanish and monopoly of multinational companies may increase. There are many complaints against these companies that they are not respecting human rights. There is a chance for reduction of natural resources in host countries. Many a time they follow unscrupulous methods to avoid paying taxes. The habits of the people change in host countries. eg - Coca-Cola. They exploit the labour force in host countries. Many a time they do not transfer technology in a proper way. They try to interfere in the political affairs of the nation.

The industrial policy of our government restricted the foreign investment in our country till recent times. But since the economic liberalization policy of India in 1991, many Multinational companies have started their operations in India. At the same time, a number of Indian firms also have become Multinational companies. e.g. WIPRO, INFOSYS, In India, about 40 MNC are working as of now.

NOTE: So far we have learnt in brief about Sole trading concerns, partnerships, Hindu undivided business firms, Co-operative societies Joint stock companies and Multinational companies which come under private sector. Besides this, we have. Government undertakings, Public sector undertakings and Public utilities.

Government undertakings : These are owned by the government for the public purpose. They are controlled and managed by the government. A Department of government under the control of a minister run these undertakings. They are started either by Central Government or by State Government or Local self Government. e.g. - Mining, Metallurgy, Ship building, Aeronautics, etc.

Public sector undertakings : These are under the control of public and government. eg - Gujarat Fertilizers, Cochin Refineries etc.

Public utilities : These are also government undertakings but they are established to provide essential products or services to the public.

They do not intend to earn profits. e.g. - Cooking gas, water, electricity, railways, posts, telegraphs etc.

Stock Exchanges

The capital of a joint-stock company is divided into small units called shares. The joint stock companies can also raise capital through issue of debentures. There is a provision to sell and buy these shares and debentures. The share or debenture holders can sell their shares or debentures at any time. For this purpose Stock Exchanges are established. In India the first share market was started in 1875 at Mumbai and even today, it is one of the prestigious stock markets in the world. The other stock exchanges are secondary share markets. Only the shares and debentures of listed out Joint stock companies can enter into these stock exchanges. Nowadays Kolkata and Bangalore stock exchanges facilitate to carry out their business through electronic media. All the stock exchanges are controlled by a Board called Securities Exchange Board of India (SEBI).

Exercises

I Fill in the blanks with appropriate words in the following sentences:

- 1 The formation of co-operative societies is regulated as per The Indian Co-operative Act of _____.
- 2 The first co-operative society in the world was started by _____ in _____ (country).
- 3 The maximum number of members in co-operative societies is _____.
- 4 The co-operative societies come into existence after receiving _____ from _____.
- 5 The First co-operative society was stated in Karnataka at _____.
- 6 The first stage of the formation a Joint stock company is _____.

- 7 The most important documents required to start Joint companies are _____ and _____.
- 8 The Multinational companies were first started in _____ (country).
- 9 The examples of multinational companies with Indian origin are _____ and _____.
- 10 The first share market was started in India at _____.

II Answer the following questions:

- 1 Give four examples of public utility service companies.
- 2 Mention any six features or characteristics of co-operative societies.
- 3 Mention the different types of co-operative societies.
- 4 List out the merits and demerits of co-operative societies.
- 5 Which are the stages to formulate Joint Stock Companies ?
- 6 Mention the advantages of Joint stock companies.
- 7 What are the advantages of multinational companies to home country?
- 8 What are the important functions of stock exchanges?

III Activity :

With the help of your teachers start a co-operative society in your school.